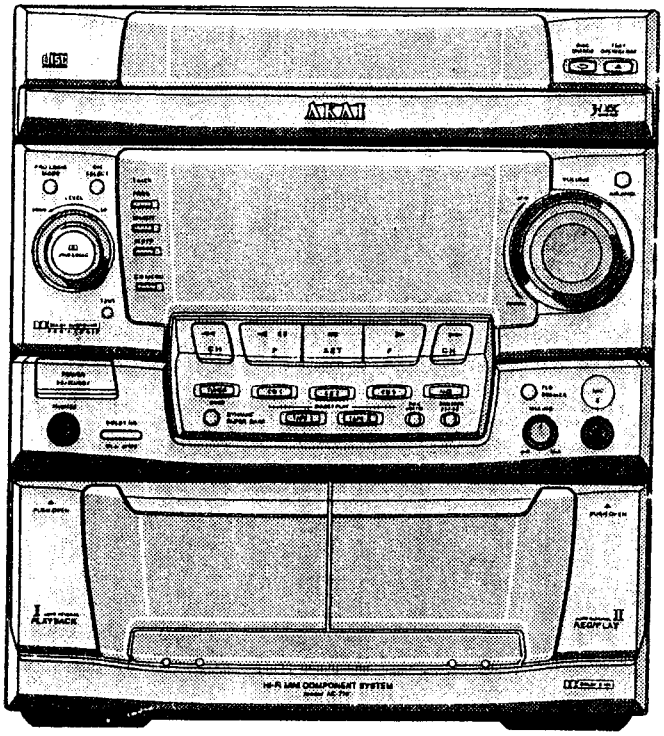
TX-510/710
(AC-510/513R/515K)
(AC-710/713R/715K)

# AKAI SERVICE MANUAL



DOLBY B NR

COMPACT disc DIGITAL AUDIO

DOLBY SURROUND
PRO • LOGIC

MINI STEREO COMPONENT SYSTEM

MODEL **AC-510/513R/515K**

MODEL **AC-710/713R/715K**

MODEL **SR-510/710**

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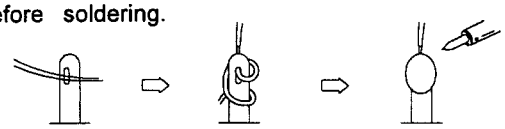
# SAFETY INSTRUCTIONS

## PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ (*) symbol parts are critical for safety. Replace them only with parts whose numbers are specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selection switches, RF cables, noise-blocking capacitors, noise-blocking filters, etc.
3. Use specified internal Wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulating Tape
   2) PVC tubing
   3) Spacers (insulating barriers)
   4) Insulating sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitor, etc.), wrap ends of wires securely about the terminals before soldering.



6. Make sure that wires do not contact heat generating parts (heat sinks, oxide metal film resistors, fusible resistors, etc.)
7. Check if replaced wires do not contact sharply edged or pointed parts.
8. Also check areas surrounding repaired parts.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

## MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can.
Please leave them at an appropriate depot.

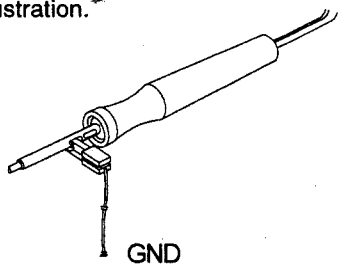
## SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to check if exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts, (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resister of 1500 ohm paralleled with a 0.15 μ F capacitor, under the unit's normal working condition.
The leakage-current should be less the 0.5mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch "ON" (if included). The resistance should be more than 2.2Mohms.

## PRECAUTIONS IN REPAIRING

When repairing or adjusting the unit, please note the following points

1. Do not put excessive pressure on the mechanical part (operation part), including the pick-up block, as extremely high mechanical precision is required in these parts.
2. When the base is removed for repair or adjustment. Make sure that there are no metal objects between the P.C board or the mecha parts and the base.
3. The Micro-Computer and the CD signal processing ICs may be damaged by static electricity or leakage from a soldering iron during repairing. While soldering, please take the precautions against leakage as in the illustration.

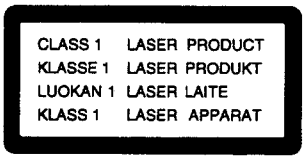



4. Do not loosen any screws in the pick-up block. Please refer to NOTE when replacing the pick up block.
5. To avoid hazardous invisible Laser Radiation, do not look at the Laser Beam (Objective lens) directly.
6. On model for some countries, laser warning labels are affixed on and inside of the unit as shown below. For your safety, read these labels carefully before repairing or adjusting the unit.

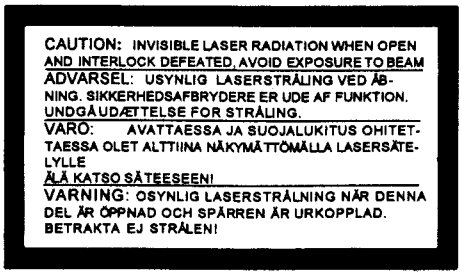
## CAUTION

The use of controls or adjustments or the performance of procedures other than those specified herein may result in hazardous radiation.

[ EUROPE, SCANDINAVIA, UK and AUSTRALIA ]




Label affixed on the rear panel of the unit


CAUTION: INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID EXPOSURE TO BEAM
ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING. SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDÆTTELSE FOR STRÅLING.
VARO: AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLA LASERSÄTELYLLE
ÄLÄ KATSO SÄTEESEEN!
VARNING: OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN!

Label affixed on the CD MECHA BLOCK

# INFORMATION

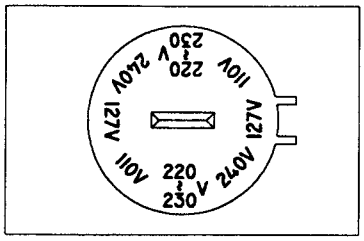
## SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

| Symbol | Principal Destination |
|---|---|
| A | USA |
| B | UK |
| E | Europe (except, UK) |
| S | Australia |
| V | Germany |
| U | Universal |
| Y* | Custom version |

## VOLTAGE CONVERSION( U Y Model only)

Before connecting the power cord, set the VOLTAGE SELECTOR located on the rear panel of the AC-515K/715K so that the correct voltage for your area is indicated.




[U5,U8, Y6, Y7 ]

## TEST MODE

Various kind of test modes are installed in this unit's microcomputer in order to test them on the production line. Following test modes among the various test modes can be used for adjustment, operation check or maintenance. To terminate the test mode, simply press the "POWER ON/STANDBY " button or disconnect the AC power cord from the AC outlet.

### 1. DECK TEST MODE

This test mode can be used for tape speed adjustment as well as bias oscillator frequency adjustment in TAPE DECK section.

While pressing and holding the "TAPE II" and "►" (F) buttons, connect the AC power cord to AC outlet. The function turns to "TAPE I" and "DUBX1" as well as " I ►", "II ►" tape direction indicators on the FLD light when this mode is engaged.

### 2. DECK CLEANING MODE

This test mode can be used for cleaning of the TAPE DECK mechanism.

Because, this mode enables engaging of the playback, fast forward (FF), and rewind (RWD) modes without a cassette tape, it makes the cleaning (such as the capstan shaft, magnetic head, pinch roller etc.,) easier.

While pressing and holding the "TAPE I" and "►" (F) button, connect the AC power cord to the AC outlet. The "TAPE I", "I ►", "II ►" tape direction indicators on the FLD light when this mode is engaged.

# SPECIFICATIONS

**[Tuner Section]**

Frequency range

FM ..... 87.5-108MHz(50KHz step)
MW ..... 530-1710KHz(U8)
531-1602KHz (except U8)
LW ..... 144-288KHz(1KHz step) (E1/E3/B1 only)
SW ..... 3.8-12.5MHz(5KHz step) (Y7 only)

USABLE SENSITIVITY

FM ..... 16.2dBf IHF,3%THD (except E1/E3/B1)
20.2dBf IHF,3%THD (E1/E3/B1)
MW ..... 500uV/m
LW ..... 800uV/m
SW ..... 800uV/m

S/N Ratio(IHF)

FM ..... MONO 75dB, STEREO 65dB
MW ..... 40dB
LW ..... 30dB
SW ..... 30dB
Stereo separation ..... 40dB(at 1KHz)

**[AMPLIFIER Section]**

Power output ..... (AC-510/513R/515K) 100W+100W(6ohms, 10%THD, EIAJ)
80W+80W (6ohms, 1%THD, DIN)
(AC-710/713R/715K) 130W+130W(6ohms, 10%THD, EIAJ)
100W+100W (6ohms, 1%THD, DIN)

Input sensitivity (AUX IN) ..... 390mV/47KΩ

channel separation ..... 64dB

Frequency response ..... 10Hz-100KHz(-3dB)

**[DECK SECTION]**

Track system ..... 4track, 2channel system
Frequency response ..... 40Hz-15KHz (Normal tape, +3dB/7dB)
40Hz-16KHz(Cro2 tape, +3dB/-7dB)
Wow & Flutter ..... 0.09% (WRMS), 0.15%(DIN)
S/N ratio ..... Dolby B 63dB (5KHz)
Dolby off 53dB (Cro2 tape)
Total harmonic distortion ..... less than 0.5%(normal tape at 315Hz)
Channel separation ..... 43dB

**[CD SECTION]**

Pick up system ..... 3Beam Laser
Sampling frequency ..... 44.1KHz
Error correction system ..... Cross interleave read solomon
Number of channels ..... 2Channe
Frequency response ..... 20Hz-20KHz
Wow & Flutter ..... Below measurable limits
S/N ratio ..... 83dB
Total harmonic distortion ..... 0.035% (at 1KHz)
Channel separation ..... 73dB(at 1KHz)
Dynamic range ..... 82dB (at 1KHz)

**[GENERAL]**

Power requirement
E1/E3/B1/S1 ..... AC 220-230V/50Hz
U5/U8/Y6/Y7 ..... AC 110/127/220-230/240V, 50/60Hz
Power consumption ..... 120W/AC-510/513R/515K, 200W/AC-710/713R/715K
Weight ..... 8.7Kg/AC-510/513R/515K, 10.2Kg/AC-710/713R/715K

**[SPEAKER SECTION]**

| ITEM | SR-510 | SR-710 |
|---|---|---|
| System Constructions | 3-way 3-speakers | 3-way 3-speakers |
| Woffer Unit | 135mm Cone type | 135mm Cone type |
| Midrange Unit | 65mm Cone type | 65mm Cone type |
| Tweeter Unit | 50mm type (ambiance) | 50mm type (ambiance) |
| System Impedance | 6Ω | 6Ω |
| Maxium Power Input | 120w | 160w |
| Sensitivity | more than 87dB/w/m | more than 87dB/w/m |
| Frequency Response | 55Hz-20KHz | 50Hz-20KHz |
| Harmonic Distortion | less than 3% | less than 3% |
| Enclosure Type | bass reflex type | bass reflex type |
| Units Layout | Center in line layout | Center in line layout |
| Dimensison | 200(W)X347(H)X247(D) | 200(w)X357(H)X277(D) |
| Net Weight | 3.9Kg/pc | 4.9Kg/pc |

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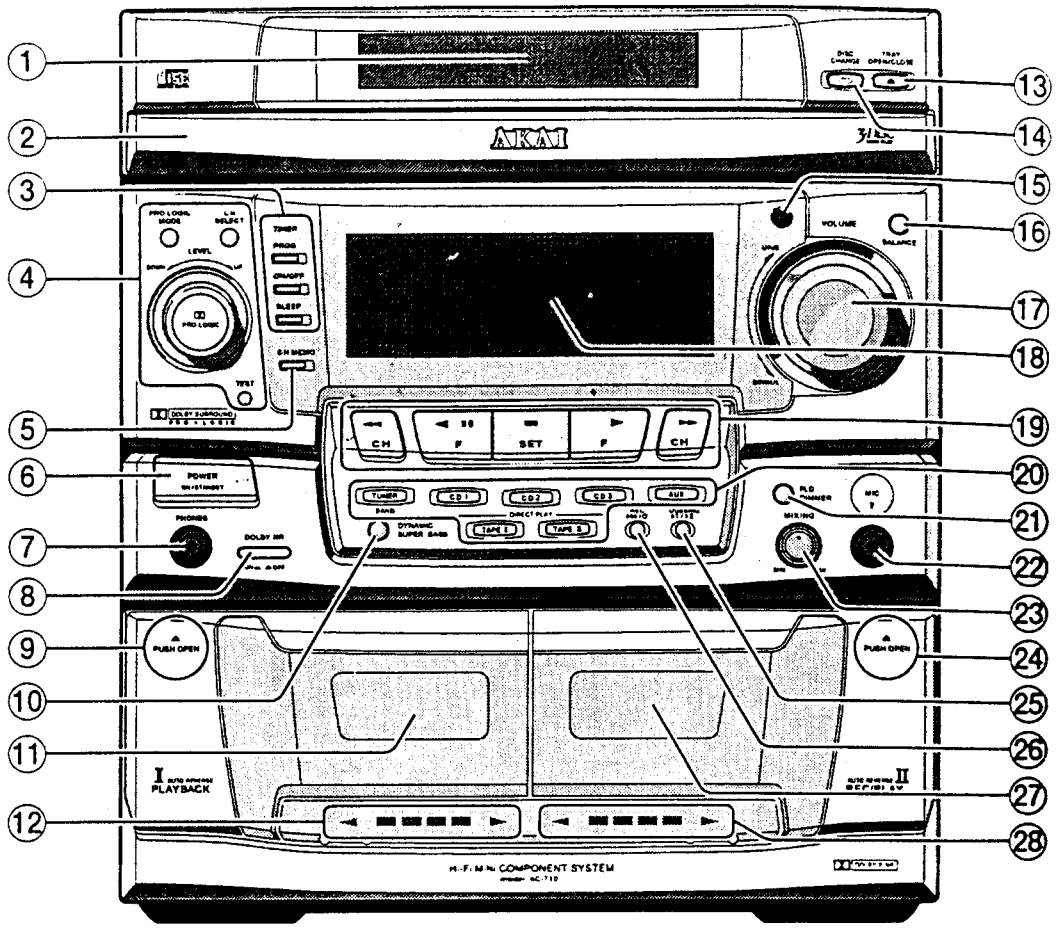
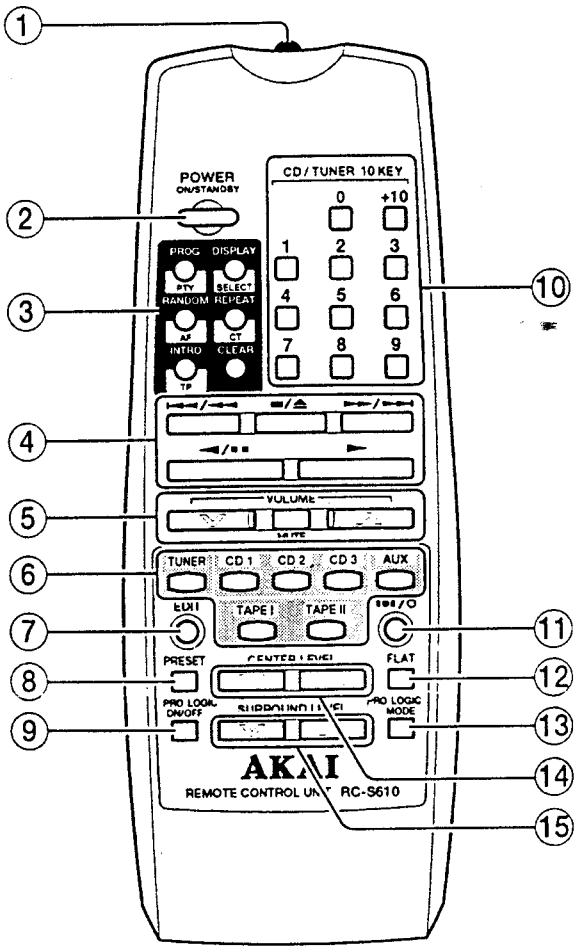
# CONTROLS

## A MAIN UNIT




1. PRO LOGIC FL display (AC-710/713R/715K)
2. Disc tray
3. TIMER operation buttons
4. Dolby PRO LOGIC mode indicators(AC-710/713R/715K)
5. CH MEMO button
6. POWER ON/STANDBY button
7. PHONES jack
8. DOLBYNR button
9. Tape deck I PUSH OPEN button
10. DYNAMIC SUPER BASS button
11. Tape deck I cassette compartment
12. Tape deck I direction indicator and transportation indicator
13. TRAY OPEN/CLOSE button
14. DISC CHANGE button
15. Remote sensor
16. BALANCE button
17. Volume control
18. System FL display
19. Multi-function buttons
20. Input source select buttons
21. Dimmer button (AC-510/513R/710/713R)
    KARAOKE button (AC-515K/715K)
22. MIC jack
23. Mixing control
24. Tape deck II PUSH OPEN button
25. DUBBINGx1/x2 button
26. REC button
27. Tape deck II cassette compartment
28. Tape deck II direction indicator and transportation indicator

## B Remote Control




When using the remote control for operation, make sure that it is pointing to the remote sensor window on the main unit.

1. Transmitting window
2. POWER ON/STANDBY button
3. CD operation buttons/RDS buttons
   (The RDS function is only available on the AC-713R and AC-513R models)
4. Multi-function buttons
5. VOLUME buttons
6. Input source select buttons
7. EDIT button
8. PRESET button
9. PRO LOGIC ON/OFF button
10. CD/TUNER 11 KEY buttons
11. Rec/pause button
12. FLAT button
13. PRO LOGIC MODE button
14 CENTER LEVEL buttons
15. SURROUND LEVEL buttons

* The 9, 13, 14 and 15 buttons are not included on the RC-S510 remote control (for AC-510/513R/515K model operation).

**Note:**

The remote control cannot be used for some functions that require the combined pressing of two tape transportation buttons (intro scan or auto play for example). Please Use the Main unit's multi-function buttons for the operation of such functions.

# I. DISASSEMBLY

1-1. REMOVE OF MAIN COVER

1) Remove the seven screws on back and six screws on both sides.
2) Remove the MAIN COVER

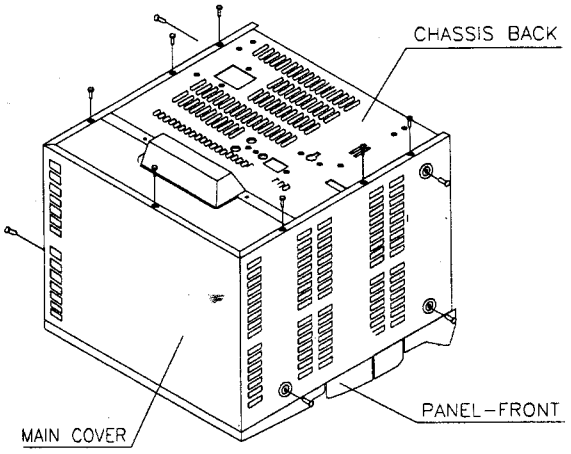



Fig. 1-1

1-2. REMOVE OF CD MECHA & FRONT PANEL

1) Remove the CD door
2) Remove the four screws (A) on both sides and disconnect three connectors and the flat cable from the TC-DK P.C.B.
3) Remove the CD player block
4) Remove the three screws (B) and two screws (C) on both sides.
5) Remove the FRONT PANEL

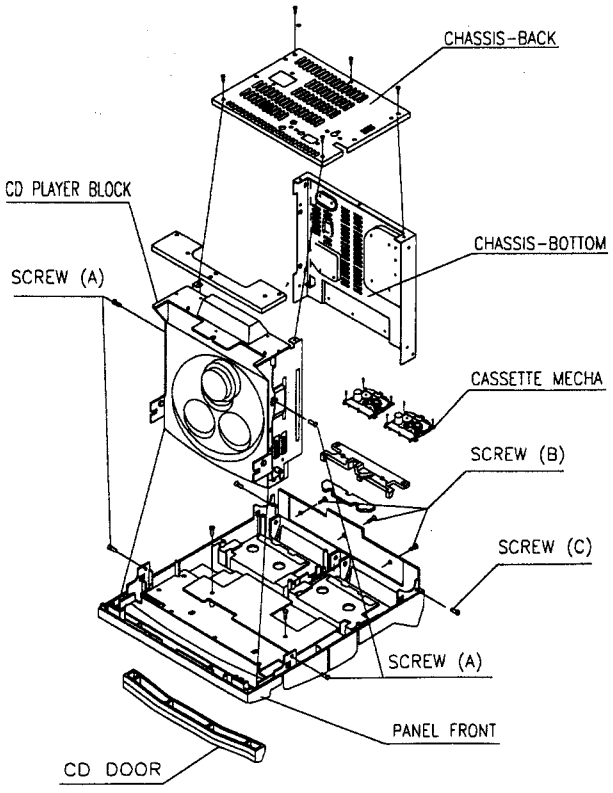



Fig. 1-2

# II. PRINCIPAL PARTS LOCATION

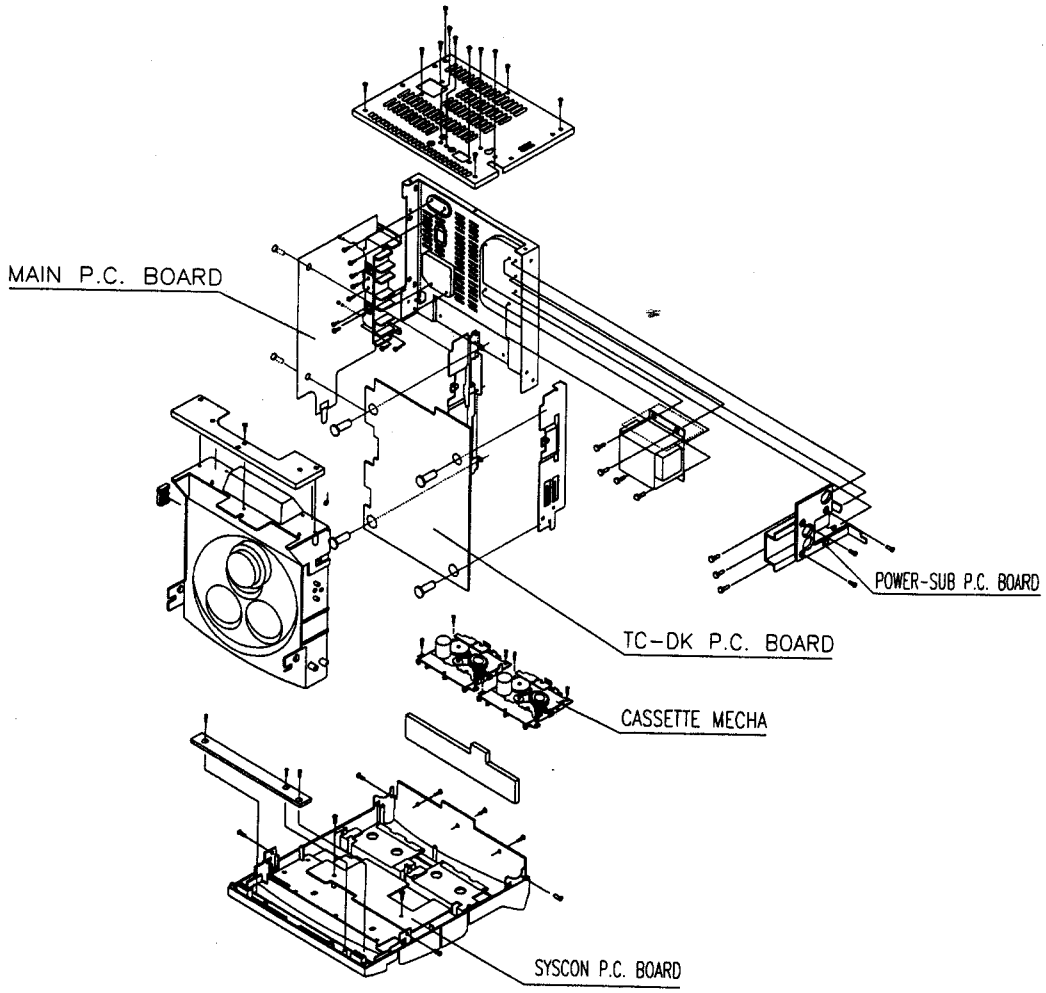



Fig. 2-1

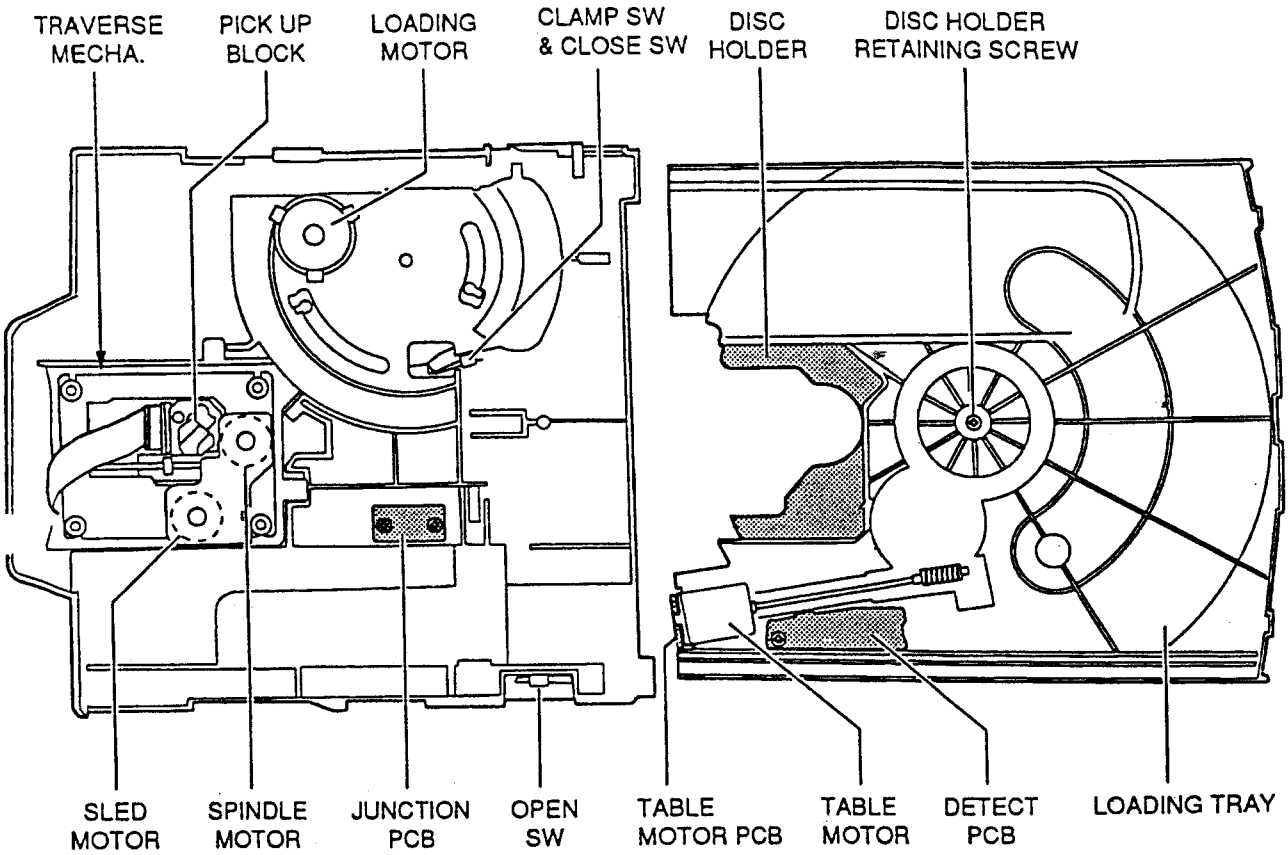



Fig. 2-2 CD PIAYER BLOCK

# III. DISASSEMBLY OF THE MAIN COMPONENTS

## 3-1. CD PLAYER BLOCK

* Remove the CD PLAYER BLOCK before proceeding.

### 3-1-1. Removal of the TRAVERSE MECHA.

1) Remove the TRAVERSE COVER by releasing the two tabs in the direction of the arrow as shown in Fig. 3-1.

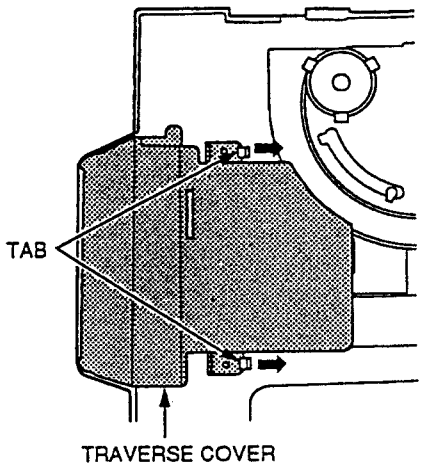



Fig. 3-1

2) Short the circuit on the PICK UP BLOCK with solder as shown in Fig. 3-2.

Note: To protect the laser diode from damage caused by high voltage static electricity, a part of the PCB on the PICK UP BLOCK has to be shorted before disconnecting the connectors. After replacement, be sure to connect the two connectors and then remove the solder of the shorted circuit before turning the power ON.

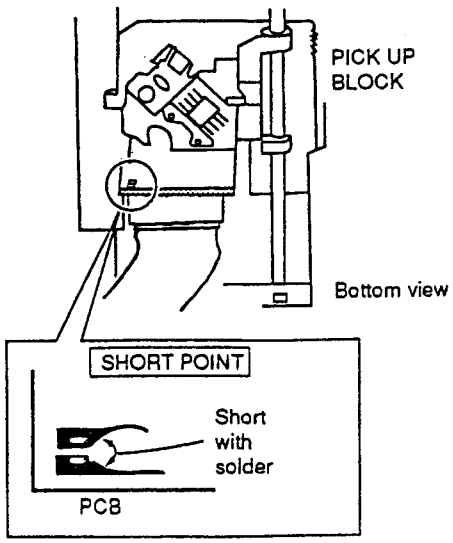



Fig. 3-2

3) Disconnect the two connectors carefully.

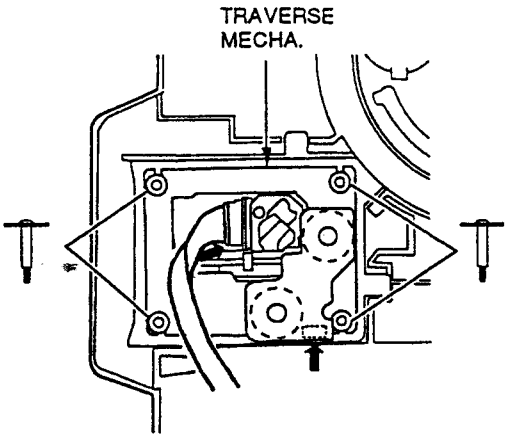



Fig. 3-3

4) Remove the four retaining screws, then remove the TRAVERSE MECHA.
5) Proceed in the reverse order for installation but never unsolder the shorted circuit before connecting the three connectors.

### 3-1-2. Replacement of the SLED MOTOR

1) Remove the TRAVERSE MECHA (refer to section 3-1-1).
2) Unsolder the leads of the SLED and SPINDLE MOTORs then remove the MOTOR PCB.

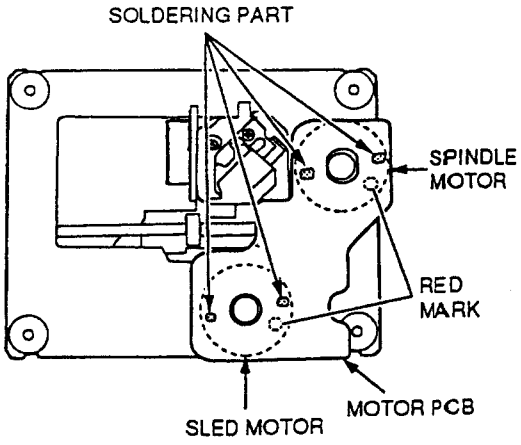



Fig. 3-4

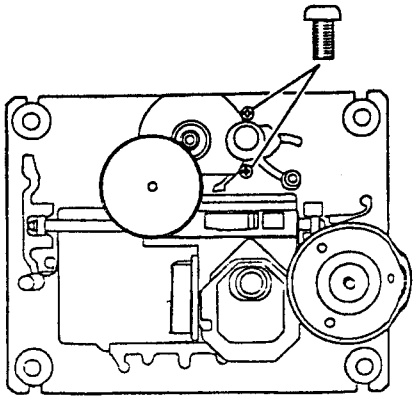


Fig. 3-5

3) Remove the two retaining screws, then remove the SLED MOTOR.
Next, extract the plastic gear from the motor shaft and attach it onto the new motor's shaft.
4) Reassemble in the reverse order.

**About the SPINDLE MOTOR:**
Replacement of the SPINDLE MOTOR itself is not recommended, because adjustment of the TURN TABLE height is quite critical and requires the use of a special jig.

### 3-1-3. Replacement of the PICK UP BLOCK

1) Remove the TRAVERSE MECHA (refer to section 3-1-1).
2) While pressing the Ⓐ stopper upwards, pull the SLIDE SHAFT to the right to remove the PICK UP BLOCK, then replace the PICK UP BLOCK.

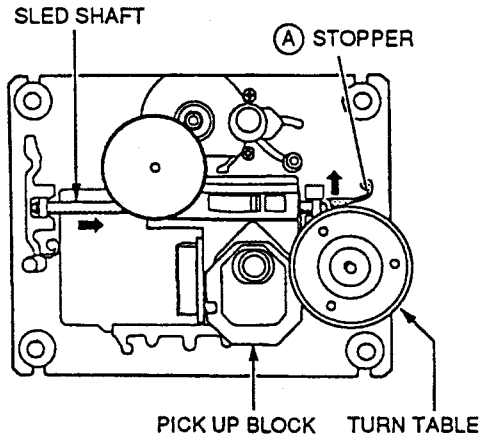



Fig. 3-6

3) Reassemble in the reverse order.

### 3-1-4. Replacement of the LOADING MOTOR

1) Slide the protruding part of the GEAR HOLDER PART in the direction of the arrow, then pull out the TRAY BLOCK.

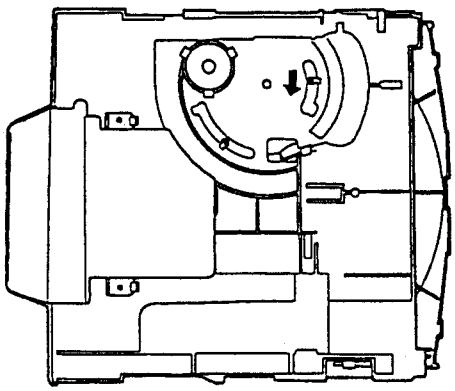


Fig. 3-7

2) Unhook the LOADING BELT with tweezers.

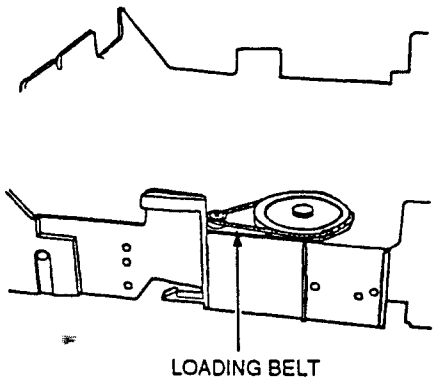



Fig. 3-8

3) Unsolder the lead wires of the LOADING MOTOR with a soldering iron.
4) While releasing the LOADING MOTOR's three retaining hooks, push the motor pully part down with your middle finger to remove the LOADING MOTOR, then replace it.

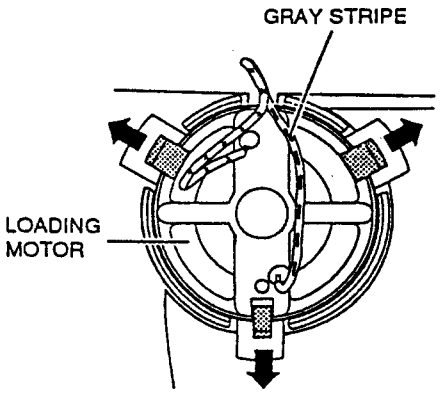



Fig. 3-9

5) Reassemble in the reverse order. Make sure that the wire with the gray stripe is connected to the motor's O marked terminal when soldering.

### 3-1-5. Removal of the TRAY BLOCK

1) If the TRAY BLOCK is in the "in" position, slide the protruding part of the GEAR HOLDER PART in the direction of the arrow and pull out the TRAY BLOCK slowly (refer to Fig. 3-7).
2) In order to disengage the two stoppers, carefully press the Ⓐ part of the TRAY BLOCK downwards while pulling the TRAY BLOCK out as shown in Fig. 3-10.

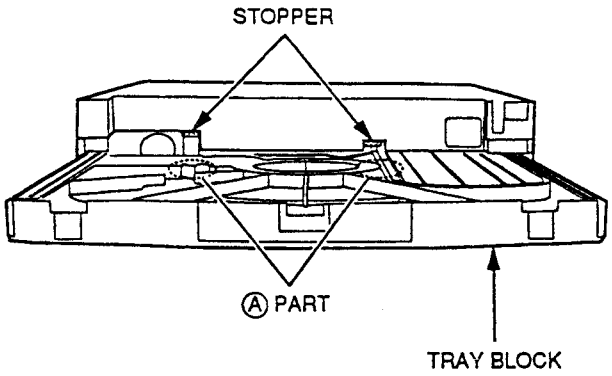



Fig. 3-10

4) Remove the TRAY BLOCK by pulling it out carefully
5) Reassemble in the reverse order for installation. When reattaching the TRAY BLOCK to the chassis, carefully align the guides on both sides of the TRAY BLOCK with their corresponding rails on the chassis. Also, make sure that any one of the reference marks on the DISC HOLDER aligns with the reference mark on the LOADING TRAY.

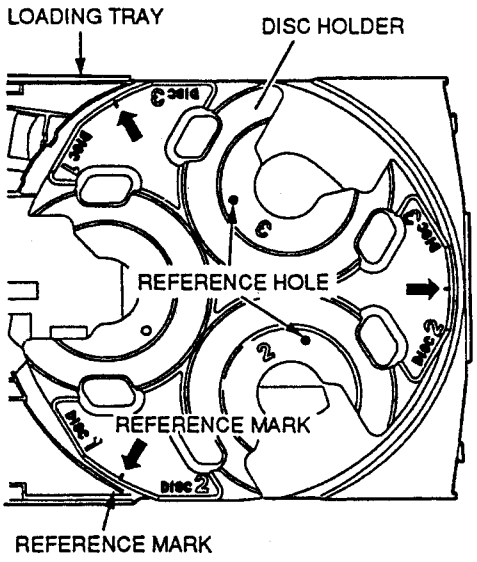



Fig. 3-11

Next, move the head of the GEAR HOLDER PART in the direction of the arrow before engaging the stoppers as shown in Fig. 3-12.

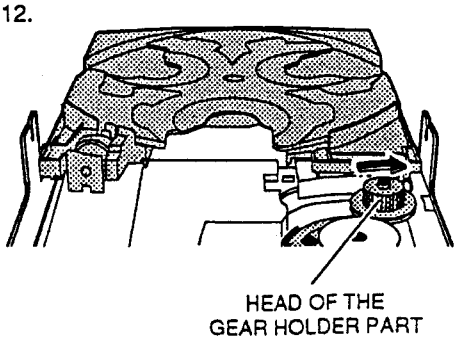



Fig. 3-12

### 3-1-6. Replacement of the TABLE MOTOR

1) Remove the TRAY BLOCK (refer to section 3-1-5).
2) Remove the DISC HOLDER retaining screw then remove the DISC HOLDER.

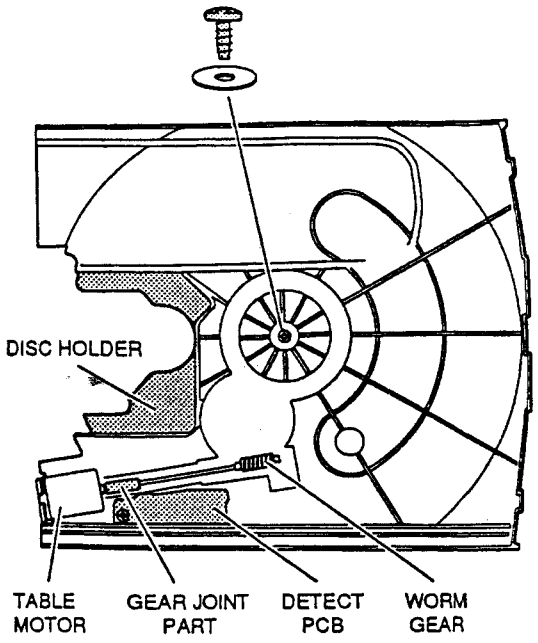



Fig. 3-13

3) Unsolder the leads of the TABLE MOTOR and remove the TABLE MOTOR PCB.

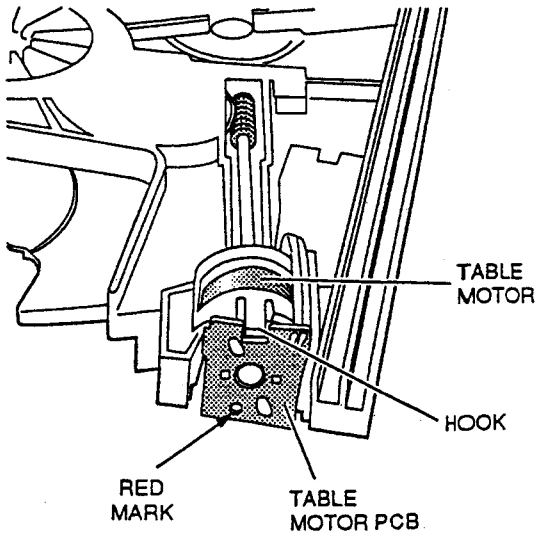



Fig. 3-14

4) Remove the TABLE MOTOR by pulling it out while opening the TABLE MOTOR retaining hook. Next, remove the WORM GEAR BLOCK by pulling the GEAR JOINT PART out and attach it to the new motor as shown in Fig. 3-13.
5) Reassemble in the reverse order.
   - When soldering the TABLE MOTOR PCB on the TABLE MOTOR, the TABLE MOTOR's red mark must be visible through the hole on the TABLE MOTOR PCB.
   - When attaching the DISC HOLDER on the LOADING TRAY, make sure to place the DISC HOLDER so that any one of the three reference marks aligns with the reference mark on the LOADING TRAY (any two reference holes on the DISC HOLDER align with the corresponding reference holes on the LOADING TRAY accordingly). (Refer to Fig. 3-11)

## 3-2. TAPE-I & TAPE-II MECHANISM BLOCK

### 3-2-1. Removal of the MECHANISM BLOCK

1) Remove the FRONT PANEL BLOCK.
2) Remove the four screws for each of the TAPE-I and TAPE-II MECHANISM BLOCKs then remove the MECHANISM BLOCKs from the FRONT PANEL BLOCK.

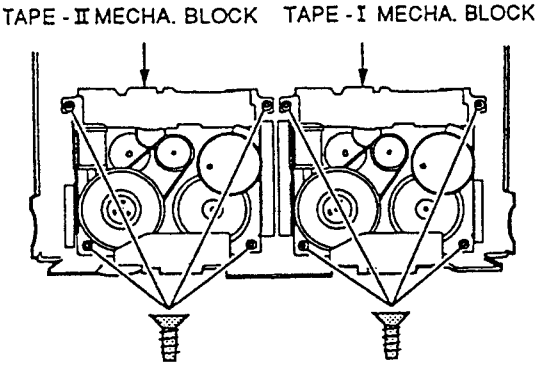



Fig. 3-15

### 3-2-2. Replacement of the CAPSTAN MOTOR

NOTE : After replacement, tape speed adjustment must be performed.

1) Unsolder the flat cable on the CAPSTAN MOTOR with a soldering iron.
2) While pressing the INTER-LOCK LEVER in the direction of the arrow, remove the two Ⓑ screws and then remove the CAPSTAN MOTOR.

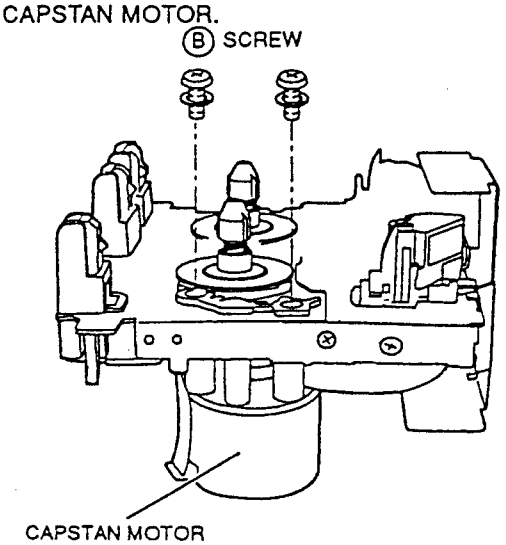



Fig. 3-16

3) Install a new motor and re-assemble in the reverse order for installation.

### 3-2-3. Replacement of the FR BELT

1) Unthread the MAIN BELT and replace the FR BELT as shown in Fig. 3-17.
2) Proceed in the reverse or for installation.

### 3-2-4. Replacement of the MAIN BELT

1) Remove the CAPSTAN MOTOR
2) Replace the MAIN BELT and re-assemble in the reverse order for installation.

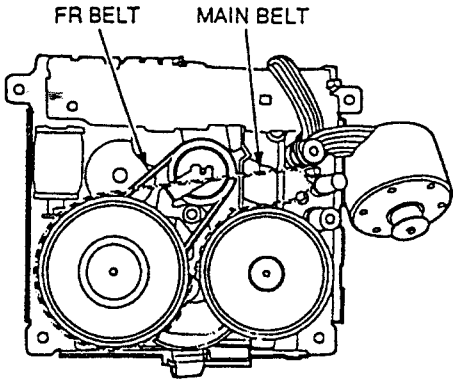



Fig. 3-17

3) After replacement, check the tape speed and if the result is not satisfactory, tape speed adjustment must be performed.

### 3-2-5. Replacement of the PINCH ROLLER BLOCK

1) Extract the PINCH ROLLER BLOCK upwards while releasing the pinch roller retaining hook in the direction of the arrow.

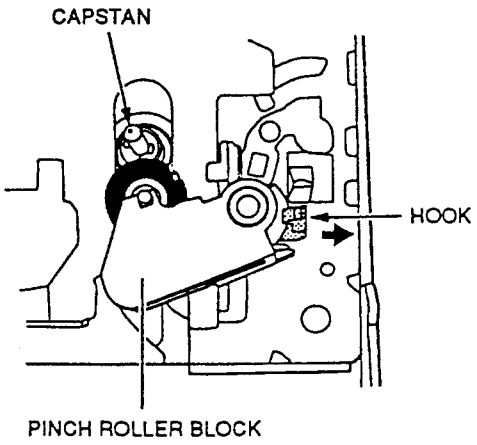



Fig. 3-18

2) Replace the PINCH ROLLER BLOCK and re-assemble in the reverse order. Attach the spring in the correct position when placing the PINCH ROLLER BLOCK.

### 3-2-6. Replacement of the PB HEAD OR REC/PB HEAD

1) Remove the two Ⓐ screws and remove the HEAD SHIELD PLATE.

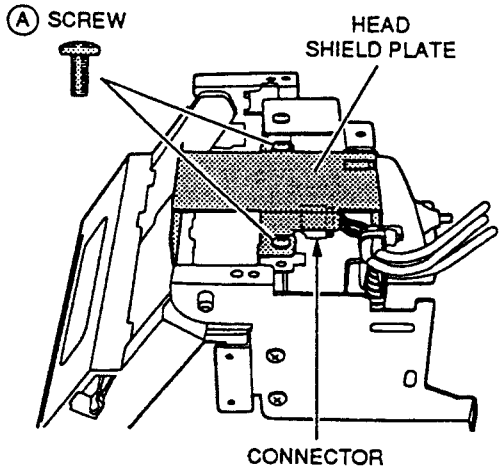



Fig. 3-19

2) Disconnect the connector on the CONNECTOR PCB and remove the PCB retaining screw.

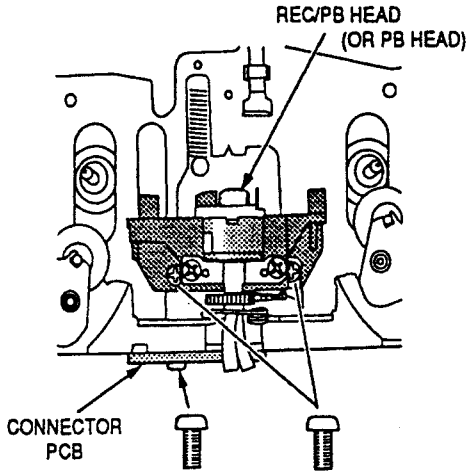



Fig. 3-20

3) Remove the two head retaining screws and remove the HEAD BLOCK.
4) Reassemble in the reverse order. After replacement, demagnetize the HEAD then perform head azimuth adjustment.

# IV. MECHANICAL ADJUSTMENT

## 4-1. ADJUSTMENT OF THE HEAD AZIMUTH ALIGNMENT

1) Connect an oscilloscope to the L-ch and R-ch speaker terminals of the unit. Set the VOLUME control on the FRONT PANEL at the appropriate level (ie, the output level is not too low or too high).
2) Play back a 10 kHz (–15 dB), HEAD AZIMUTH ALIGNMENT TEST TAPE (TF-106CH) then adjust the HEAD AZIMUTH ALIGNMENT Ⓐ (FWD PLAY) and Ⓑ (REV PLAY) SCREWs respectively so that the waveform level of both the L-ch and R-ch are at maximum and also they are in the same phase in both FWD and REV directions. (Use a sharp edge philips type screwdriver that is de-magnetized for adjustment.)
   Perform the adjustment on both the TAPE-I and TAPE-II heads if necessary.

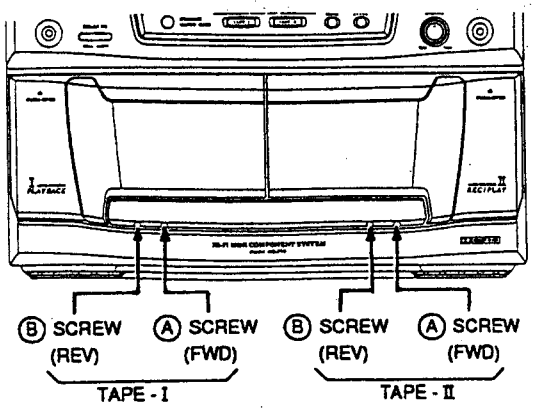



Fig. 4-1

# V. ELECTRICAL ADJUSTMENT

## 5-1. TAPE DECK SECTION

**NOTE :**

1) The following adjustment should be performed in the "DECK test mode".
   To engage the DECK test mode, connect the AC power cord to the AC outlet while pressing the "TAPE-II" and "▶ ( F )" buttons together.
   When the "DECK test mode" is engaged, the "DUBX1" indicator on the FL display will light.
2) When performing the tape speed adjustment, observe the following notes.
   - Adjustment should be started more than 30 seconds after the power is switched ON.
   - Adjustment should be made on X2 speed mode first then adjust the normal speed mode.
   - Adjustment should be made in the forward direction.
3) To disengage the "DECK test mode", press the "POWER" button or unplug the AC power cord from the AC outlet.

| STEP | ADJUSTMENT |
|---|---|
| 1. | Test tape/input signal |
| 2. | Mode |
| 3. | Check point, adjustment part |
| 4. | Remarks (•) and result (*) |

Adjustment Part →
Test Point ←

**1 TAPE-I (X2) TAPE SPEED**

1. 3,150 Hz test tape (TF-110CT)
2. TAPE-I, PLAY
3. TP-R.OUT, VR3100
4. • Connect a frequency counter to the TP-R.OUT (or L.OUT) and press the "DUBBING" button to engage double speed.
   * 6,340 ± 20 Hz

**2 TAPE-I NORMAL TAPE SPEED**

1. 3,150 Hz test tape (TF-110CT)
2. TAPE-I, PLAY
3. TP-R.OUT, VR3101
4. • Connect a frequency counter to the TP-R.OUT and press the "▶ ( F )" button again to resume normal tape speed.
   * 3,150 ± 10 Hz

**3 TAPE-II (X2) TAPE SPEED**

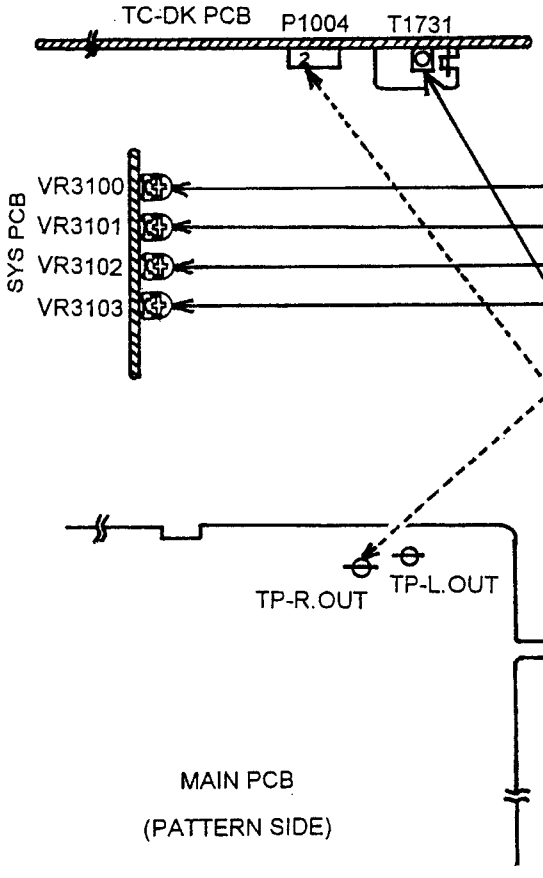
1. 3,150 Hz test tape (TF-110CT)
2. TAPE-II, PLAY
3. TP-R.OUT, VR3102
4. • Press the "TAPE-II" button and play back the test tape.
   • Connect a frequency counter to the TP-R.OUT and press the "DUBBING" button to engage double speed.
   * 6,320 ± 20 Hz

**4 TAPE-II NORMAL TAPE SPEED**

1. 3,150 Hz test tape (TF-110CT)
2. TAPE-II, PLAY
3. TP-R.OUT, VR3103
4. • Connect a frequency counter to the TP-R.OUT and press the "▶ ( F )" button again to resume normal tape speed.
   * 3,140 ± 10 Hz

**5 BIAS OSC FREQUENCY**

1. CrO2 type blank tape
2. TAPE-II, REC
3. P1004 ② pin, T1731
4. • Connect a frequency counter between P1004 pin and GND. (10 : 1 probe should be used to avoid affecting the measurement.)
   • Start a recording (press the "REC" button then press the "▶" button).
   The "AUX" source indicator appears automatically.
   * 100.0 ± 0.2 kHz



## 5-2.CD PLAYER SECTION

### TEST MODE FOR CD PLAYER'S OPERATION

Some adjustments of the CD PLAYER section are automatically carried out by the micro computer.

If the CD player section is defective and it is necessary to partially check the operation, "CD TEST" mode can be used while repairing.

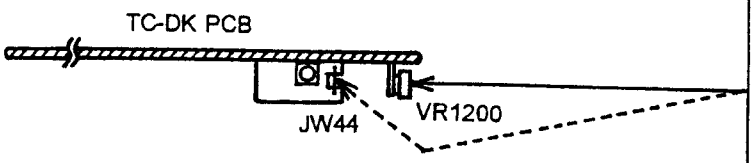
**Engaging the "CD TEST" MODE**

While pressing and holding both the "CD1" and " (F)" buttons, plug in the AC power cord to the AC outlet.

**Note :**

- During "CD TEST" mode, only the DISC"1" open/close button can be used for loading. So, place a disc on "TRAY 1".
- Proceed testing by pressing the "CD1" button once for each testing step.
- To disengage the "CD TEST" mode, press the "POWER ON/STANDBY" button or disconnect the AC power cord from the AC outlet.

| DISPLAY | FUNCTION |
|---|---|
| T0 (TEST-0) | Initial condition of the "CD TEST" mode. |
| T1 (TEST-1) | Perform "focus search". |
| T2 (TEST-2) | Turn on the "focus servo". |
| T3 (TEST-3) | Mode of the "E-F balance" adjustment. |
| T4 (TEST-4) | E-F balance adjustment is carried out automatically and its data value is displayed on the FLD. |
| T5 (TEST-5) | Mode of the "Tracking gain" adjustment. |
| T6 (TEST-6) | Tracking gain adjustment is carried out automatically and its data value is displayed on the FLD. |
| T7 (TEST-7) | Normal playback mode is engaged. |




| 1 | FOCUS OFFSET |
|---|---|
| 1. Test disc (SONY TYPE-III) | |
| 2. Play back | |
| 3. JW44 and VR1200 | |
| 4. Connect the hot side probe of an AC milivoltmeter to JW44 on the BIAS OSC PCB and GND side probe to the chassis. Adjust the VR1200 on the TC-DK PCB until indication of the AC milivoltmeter is maximum. | |

# VI. PARTS LIST

**ATTENTION**

1. When placing an order for parts, be sure to list the part No., Model No. and the description of each part. Otherwise, the nondelivery of the part or the delivery of a wrong part may result.
2. Please make sure that part No. is correct when ordering.
   If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in parts list of preliminary service manual may have been the subject of changes, please use this parts list for all future reference.

**[NOTE]**

1. This parts list lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts list shows those parts in the parts list which are considered particularly important for service.
3. Parts not shown in the parts list and "Common List for Service Parts" will not in principle be supplied.

**WARNING**

⚠ (*) INDICATED SAFETY CRITICAL COMPOMETS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

**AVEERTISSEMENT**

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ POUR MAINTENIR LE DEGRÉDE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

**1. REMOTE P.C. BOARD**

| REF. NO. | PARTS No. | DESCRIPTION |
|---|---|---|
| CF001 | 007-300455-63 | RESONATOR CRK455 455KHz |
| IC001 | 033-806122-13 | REMOTE TRANSMITTER UPD6122G-001 |
| LED001 | 130-670303-00 | INFRA RED EMITINT DIODE EL-1L1 |
| PCB | 090-385604-01 | REMOTE BOARD T=1.6mm 94HB (46X119mm) |
| Q001 | 031-278050-03 | TRANSISTOR NPN KTC8050C |
| D001-004 | 030-134148-00H | D SILICON IN4148 |
| | 210-010101-01S | REMOTE BATTERY COVER |

**2. SYS CON P.C. BOARD**

| REF. NO. | PARTS No. | DESCRIPTION |
|---|---|---|
| D 3001-3002/3004-3015 | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3079-3088/3100-3109/3111-3112 | | |
| D 3003/3016/3017/3100/3120 (for AC-710/713R/715K) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3018-3031 | 030-560034-10 | D LED MYB34C YELLOW |
| D 3032-3038 | 030-540034-04 | D LED MGB34D GREEN |
| D 3039-3042/3046/3048-3054 | 030-560031-00 | D LED MYB31CA YELLOW |
| D 3045 | 030-510031-00 | D LED MSB31TA RED |
| D 3047(for AC-710/713R/715K) | 030-530031-04 | D LED MGB31C GREEN |
| D 3113(S1/Y7) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3114(for AC-515K/715K) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3115(S1/A3) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3116(for AC-513R/713R) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3117(for AC-515K/715K) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3119(E1/B1/RE1/E3) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3121(for AC510/513R/515K) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 3200/3205/3206/3211 | 030-560031-00 | D LED MYB31CA YELLOW |
| D 3201-3204/3207-3210 | 030-540034-04 | D LED MGB34D GREEN |
| FR3301(for AC-710/713R/715K) | 013-689105-82 | R FUSE V S10 FR25 1/4W 6R8J |
| IC3001A | 034-B00301-12 | IC M38197MA-149FP TX2-SYS75-1 |
| IC3002 | 033-509121-29 | IC PST-9121 T05 |
| IC3003 | 033-002402-42 | IC XL24C02P |
| IC3004 | 033-202011-14 | IC TA2011S |
| IC3005-3007/3200 | 034-304094-18 | IC BU4094BCF |
| IC3100 | 033-304094-18A | IC BU4094BC |
| IC3101(for AC-513R/713R) | 034-106579-33 | IC SAA6579T-T |
| IC3102(for AC-513R/713R) | 034-307073-16 | IC LC7073M |
| IC3300(for AC-710/713R/715K) | 034-816312-13 | IC UPD16312 |
| IN3001A | 035-130463-00 | IND FL BJ463GK |
| IN3300(for AC710/713R/715K) | 035-130521-00 | IND FL 5-ST-21GK |
| J 3001 | 061-121406-00 | PHONE J HSJ1406-01-010 3.5 |
| J 3002(for AC-515K/715K) | 061-121406-00 | PHONE J HSJ1406-01-010 3.5 |
| J 3003 | 060-406123-99 | SOCKET 00 6216 006 000 6P |
| J 3022 | 060-423124-99 | SOCKET 00 6216 023 100 23P |
| J 3033 | 060-406123-99 | SOCKET 00 6216 006 000 6P |
| P 3001(for AC-510/513R/515K) | 060-103204-07 | PLUG S3B-PH-K WHT 3P |
| P 3001A(for AC-710/713R/715K) | 060-111204-07 | PLUG S11B-PH-K WHT 11P |
| P 3011(for AC-510/513R/515K) | 060-422124-99 | PLUG TKC-V22P-A1 22P |
| P 3011A(for AC-710/713R/715K) | 060-424124-99 | PLUG TKC-V24P-A1 24P |
| PH3001 | 036-600446-01 | DETECTOR SPS-446-1 |
| SW3001 | 040-002410-20 | SW ROTARY EC16B24304 |
| SW3002 | 046-080001-00 | SW PUSH VPS-800 |
| TR3003-3005/3107-3110/3124-3126 | 031-440144-05V | DTR DTC144ES(47-47) T05 |
| TR3101/3103/3113-3120/3122-3123 | 031-211048-25V | TR 2SA1048 Y,GR T05 |
| TR3100/3102/3104-3106 | 031-221425-00V | TR 2SB1425 S,E T05 |
| TR3111(for AC-513R/713R) | 031-211048-25V | TR 2SA1048 Y,GR T05 |
| TR3112(for AC-513R/713R) | 031-440144-05V | DTR DTC144ES(47-47) T05 |

| | | |
|---|---|---|
| TR3121(for AC-710/713R/715K) | 031-211048-25V | TR 2SA1048 Y,GR T05 |
| TR3300-3301(for AC-710/713R/715K) | 031-233576-00V | TR 2SC3576 T05 |
| TR3302(for AC-710/713R/715K) | 031-430114-05V | DTR DTA114ES(10-10) T05 |
| TS3001-3022/3300/3301 | 046-110201-00 | SW TACT 1.T-1102A 160GM |
| TS3023-3028(for AC-710/713R/715K) | 046-110201-00 | SW TACT 1.T-1102A 160GM |
| VR3001 | 011-202298-00 | VR ROTARY RK11K1140 L17.5 B202 |
| VR3100/3102 | 112-222311-05 | R S-FIX V T05EVNDCAA3 0.10W222 |
| VR3101/3103 | 112-102311-05 | R S-FIX V T05EVNDCAA3 0.10W102 |
| W 3001(for AC-510/513R/515K) | 063-552701-03 | WA PH-SAN L270 3P |
| W 3001A(for AC-710/713R/715K) | 063-552701-11 | WA PH-SAN L270 11P |
| W 3007 | 077-622107-15 | WF 2468#26 P2.0 C09 L100 15P |
| W 3008 | 077-622107-16 | WF 2468#26 P2.0 C09 L100 16P |
| W 3009 | 077-626107-13 | WF 2468#26 P2.0 C09 L100 13P |
| W 3010 | 077-626117-10 | WF 2468#26 P2.0 C09 L100 10P |
| X 3001 | 007-208000-06 | OSC CE CST8.00MTW 8.000MHZ |
| X 3002 | 037-032768-10M | OSC X'TAL C-002RX 32.768KHZ |
| X 3100(for AC-513R/713R) | 007-204000-06 | OSC CE CST4.00MGW 4.000MHZ |
| X 3101(for AC-513R/713R) | 037-004332-10Z | OSC X'TAL HC-49/U-S 4.33200MHZ |

**3. MAIN P.C. BOARD**

| REF. NO. | PART No. | DESCRIPTION |
|---|---|---|
| D 001/010/022/024/042/044/046/083/ D 121/123/124/141-143/155-156/ D 175-176/221/724 | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 002/003( for AC-510/513R/515K) | ⚠030-310040-02 | D SILICON DBF40C 200/4.0A |
| D 002A/003A(for AC-710/713R/715K) | ⚠030-310060-02 | D SILICON DBF60C 200/6.0A |
| D 004/005/043/085/144 | 030-410051-20H | D ZENER MTZJ5.1B T52 |
| D 006-009 | ⚠030-310152-06 | D SILICON RL152M11S15 100/1.5A |
| D 021/023/081/151/152/158/171/172/178 | 030-314002-10H | D SILICON 1N4002-F T52 100/1A |
| D 025/145/721-723 | 030-410062-10H | D ZENER MTZJ6.2A T52 |
| D 041 | 030-410075-10H | D ZENER MTZJ7.5C T52 |
| D 045 | 030-410015-03H | D ZENER MTZJ15B T52 |
| D 063/066/751-753(for AC-510/513R/515K) | 030-410062-10H | D ZENER MTZJ6.2A T52 |
| D 063A/066A(for AC-710/713R/715K) | 030-410075-10H | D ZENER MTZJ7.5C T52 |
| D 084 | 030-410330-00H | D ZENER MTZJ33B T52 |
| D 153/173 | 030-410030-10H | D ZENER MTZJ3.0A T52 |
| D 154/174 | 030-410110-10H | D ZENER MTZJ11A T52 |
| D 157/177 | 030-315401-00 | D SILICON IN5401M24S15 3A/100V |
| D 224/771-772/775(for AC-710/713R/715K) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 531-533(for AC-715K) | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 551-554(for AC-515K/715K) | 030-320131-01H | D SILICON H 1SS131T T52 |
| F1(for AC-510/513R/515K) | ⚠ 082-222000-06 | FUSE TIME 218 250V 2.00A |
| F2(for AC-515K) | ⚠ 082-222000-06 | FUSE TIME 218 250V 2.00A |
| F1(for AC-710/713R/715K) | ⚠ 082-222500-06 | FUSE TIME 218 250V 2.50A |
| F2(for AC-715K) | ⚠ 082-222500-06 | FUSE TIME 218 250V 2.50A |
| IC 021 | 033-507805-00B | IC ML7805FA 5V/1A |
| IC 101/801 | 033-304094-18A | IC BU4094BC |
| IC 201(for AC-510/513R/515K) | 033-204201-16 | IC STK4201-2 |
| IC 201A(for AC-710/713R/715K) | 033-204221-16 | IC STK4221-2 |
| IC 501(for AC-515K/710/713R/715K) | 033-K65843-12 | IC M65843AFP |
| IC 581 | 033-904558-30A | IC NJM4558L |
| IC 602(for AC-710/713R/715K) | 034-K02177-74 | IC NJM2177AFB3 |
| IC 701 | 034-262422-12 | IC M62422FP |
| IC 731 | 033-203835-18 | IC BA3835S |
| IC 751/761(for AC-710/713R/715K) | 033-209412-14 | IC TC9412P |
| IC 761A(for AC-510/513R/515K) | 033-009260-14 | IC TC9260P |
| IC 771(for AC-710/713R/715K) | 033-904558-30A | IC NJM4558L |
| IC 802(for AC710/713R/715K) | 033-304094-18A | IC BU4094BC |

| | | |
|---|---|---|
| J 011(for AC510/513R/515K) | 060-422122-99 | SOCKET TKC-V22X-A1 22P |
| J 011A(for AC-710/713R/715K) | 060-424122-99 | SOCKET TKC-V24X-A1 24P |
| J 201(for AC-510/513R/515K) | 061-122000-00 | PHONE J HSJ2000-01-010 3.5 |
| J 201A(for AC-710/713R/715K) | 061-123000-00 | PHONE J HSJ3000-01-010 3.5 |
| L 201/251 | 004-285103-08 | COIL FIX2 202AK018A COILS 2R2K |
| L 281(E1/B1/RE1/E3/A3) | 084-070410-00 | COIL BALUM OPW/5-8-14-5H2 |
| L 801 | 002-300002-09 | COIL LF LF-4D-102 102UH |
| P 006 | 060-116204-07 | PLUG S16B-PH-K WHT 16P |
| P 012 | 060-102045-20 | PLUG B2P-3-VH P7.92 2P |
| P 013/902 | 060-405001-17 | PLUG RTB-1.5-5P 5P |
| P 014 | 060-104205-27 | PLUG B4B-PH-K WHT 4P |
| P 015(for AC-710/713R/715K) | 060-403001-17 | PLUG RTB-1.5-3P 3P |
| R 004-005/043 | ⚠ 013-478205-75 | R OMF H S10FLR ERG12SP1/2WR47J |
| R 047-048 | ⚠ 013-221205-75 | R OMF H S10FLR ERG12SP1/2W221J |
| R 081 | ⚠ 013-399205-75 | R OMF H S10FLR ERG12SP1/2W3R9J |
| R 021/103/106/109/112 | ⚠ 013-109205-75 | R OMF H S10FLR ERG12SP1/2W1R0J |
| R 153/173 | ⚠ 013-122305-75 | R OMF H S12 FLR ERG1SP 1W 122J |
| R 209/259/283 | ⚠ 013-100305-75 | R OMF H S12 FLR ERG1SP 1W 100J |
| R 210/260(for AC-510/513R/515K) | ⚠ 013-100305-75 | R OMF H S12 FLR ERG1SP 1W 100J |
| R 210A/260A(for AC-710/713R/715K) | ⚠ 013-560305-75 | R OMF H S12 FLR ERG1SP 1W 560J |
| R 212/262 | 013-108410-51 | R CT P F09 PLATE 2W R10K |
| RL 001-002 | 006-110212-04 | RELAY POW OSA-SS 212DM5 TV-3 |
| TM 201 | 061-780401-00 | TERMINAL PUSH CJ-9007-060 4P |
| TR 022/024//026/043 | 031-440114-05V | DTR DTC114ES(10-10) T05 |
| TR 023 | 031-221425-00V | TR 2SB1425 S,E T05 |
| TR 025 | 031-220621-00V | TR 2SB621 R,S T05 |
| TR 044/081 | 031-221375-00 | TR 2SB1375 |
| TR 045/201-203/251-253 | 031-232458-25V | TR 2SC2458 Y,GR T05 |
| TR 046 | 031-242012-00 | TR 2SD2012 |
| TR 021/041/082/101-104/141 | 031-211048-25V | TR 2SA1048 Y,GR T05 |
| TR 121-124 | 031-440114-60V | DTR DTC114TS(10) T05 |
| TR 151 | 031-590175-00 | TR FET 2SJ175 |
| TR 152-172 | 031-232459-57V | TR 2SC2459 GR,BL T05 |
| TR 171 | 031-251093-00 | TR FET 2SK1093 |
| TR 221 | 031-430114-05V | DTR DTA114ES(10-10) T05 |
| TR 222(only for AC-710) | 031-430114-05V | DTR DTA114ES(10-10) T05 |
| TR 281 | 031-221425-00V | TR 2SB1425 S,E T05 |
| TR 285 | 031-440144-05V | DTR DTC144ES(47-47) T05 |
| TR 531(for AC-715K) | 031-430114-19V | DTR DTA114TS(10) T05 |
| TR 532-533/535-536/539-541 (for AC-715K) | 031-440144-60 | DTR DTC144TS(47) T05 |
| TR 534/537-538(for AC-715K) | 031-440114-60V | DTR DTC114TS(10) T05 |
| TR 551-552(for AC-515K/715K) | 031-440114-60V | DTR DTC114TS(10) T05 |
| TR 601-602(for AC-710/713R/715K) | 031-430114-19V | DTR DTA114TS(10) T05 |
| TR 603-604(for AC-710/713R/715K) | 031-440114-60V | DTR DTC114TS(10) T05 |
| W 014 | 063-552301-04 | WA SAN-PH #24 L230 4P |
| W 302(for AC-710/713R/715K) | 063-555501-07 | WA SAN-PH L550 7P |
| W 801(for AC-515K/715K) | 063-502401-11 | WA SDN L200 6P |
| X 501(for AC-710/713R/715K) | 007-002000-40 | OSC CE CSA2.00MG 2.000MHZ |
| X 551(for AC-515K/715K) | 007-200400-03 | OSC CE DCRK400 400.000KHZ |

**4. TC-DK P.C. BOARD**

| REF. NO. | PARTS No. | DESCRIPTION |
|---|---|---|
| D 1300-1304 | 030-314002-10H | D SILICON 1N4002-F T52 100/1A |
| D 1400/1401/1721 | 030-320131-01H | D SILICON H 1SS131T T52 |
| D 1501 | 030-410051-10H | D ZENER MTZJ5.1A T52 |
| FL1611/1621/1661/1671 | 007-100100-09 | COIL TUN 1 100Z-121 100.00KHZ |

| | | |
|---|---|---|
| IC1001 | 033-314052-21 | IC MC14052BCP |
| IC1002 | 033-904558-30A | IC NJM4558L |
| IC1100 | 033-601782-64Q | IC CXA1782BQ |
| IC1200 | 033-K02508-64 | IC CXD2508AQ |
| IC1210 | 033-904558-30A | IC NJM4558L |
| IC1300 | 033-209258-61 | IC KA9258D |
| IC1400 | 033-206247-18 | IC BA6247 |
| IC1601 | 034-101897-64 | IC CXA1897Q |
| IC1701/1702 | 034-304094-18 | IC BU4094BCF |
| J 1001 | 061-782421-00 | PIN J HSP-242V1-05 2P |
| J 1002 | 060-423123-99 | SOCKET 00 6216 023 000 23P |
| J 1100 | 060-416109-99 | SOCKET 00 6232 016 006 16P |
| L 1501(S1/U5/U8/Y6/Y7/A3) | 005-229056-01H | COIL FIX 1 LAP02TA T26 2R2J |
| L 1721 | 005-101056-00H | COIL FIX 1 LAP02TA T26 101J |
| P 1004 | 060-108205-27 | PLUG B8B-PH-K WHT 8P |
| P 1005 | 060-103205-27 | PLUG B3B-PH-K WHT 3P |
| P 1400 | 060-105204-27 | PLUG S5B-PH-K WHT 5P |
| P 1401 | 060-107204-29 | PLUG S7B-PH-K WHT 7P |
| P 1402 | 060-106206-27 | PLUG S6B-PH-K WHT 6P |
| T 1731 | 002-800002-09 | COIL OSC 1 C1047 |
| TM1501 | 061-480312-00 | TERMINAL LEVER HSP-312V-02 |
| TR1100/1400/1632/1743/1682 | 031-211048-25V | TR 2SA1048 Y,GR T05 |
| TR1300/1301 | 031-221425-00V | TR 2SB1425 S,E T05 |
| TR1302/1601/1621/1651/1671/ TR1644/1721/1722 | 031-440114-05V | DTR DTC114ES(10-10) T05 |
| TR1401/1501/1611-1622/1661-1662/1701 | 031-232458-25V | TR 2SC2458 Y,GR T05 |
| TR1502(for AC-513R/713R) | 031-250304-06V | TR FET 2SK304 E,F T05 |
| TR1613/1663 | 031-241012-06V | TR 2SD1012-V-SPA-AC F,G,H T05 |
| TR1631/1681/1665 | 031-430114-19V | DTR DTA114TS(10) T05 |
| TR1641/1642/1691/1692 (for AC-710/713R/715K) | 031-430114-19V | DTR DTA114TS(10) T05 |
| TR1643/1693(for AC-715K) | 031-430114-19V | DTR DTA114TS(10) T05 |
| TR1645/1695(for AC-515K/715K) | 031-232458-25V | TR 2SC2458 Y,GR T05 |
| TR1723-1725 | 031-231815-26V | TR 2SC1815 Y,GR T05 |
| TR1726(E1/B1/RE1/E3) | 031-211048-25V | TR 2SA1048 Y,GR T05 |
| TR1731-1732(E1/B1/RE1/E3) | 031-232458-25V | TR 2SC2458 Y,GR T05 |
| TR1771-1774(for AC-710/713R/715K) | 031-440114-05V | DTR DTC114ES(10-10) T05 |
| TU1501(E1/B1/RE1/E3) | 103-146601-04 | TUNER TFCB3E720A FM/MW/LW |
| TU1501A(S1/U5/U8/Y6) | 103-146401-04 | TUNER TFCB1U717A FM/AM |
| TU1501B(Y7) | 103-146101-04 | TUNER TFCB1S713A FM/MW/SW |
| VR1200 | 112-103311-05 | R S-FIX V T05EVNDCAA3 0.10W103 |
| W 1006 | 063-551001-16 | WA PH L100 16P |
| W 1400/1401 | 077-322087-09 | WF 2468#26 P2.0 C09 L80 9P |
| X 1200 | 007-201693-06 | OSC CE CSA16.93MHZ |
| D 4410 | 030-600048-00 | D LED GL4800 |
| J 4410 | 060-405124-99 | SOCKET 00 6216 005 100 5P |
| J 4411 | 060-405123-99 | SOCKET 00 6216 005 000 5P |
| TR4410 | 031-594800-00 | TR PHOTO PT4800 |
| W 4410 | 077-622077-02 | WF 2468#26 P2.0 C09 L70 2P |
| W 4412 | 063-555301-05 | WA SAN-PH L530 5P |

**5. POWER-SUB P. C. BOARD**
**(AC-710/713R/715K only)**

| REF NO. | PARTS NO | DESCTIPTION |
|---|---|---|
| D 2001 | 030-310040-02 | D SILICON DBF40C 200/4.0A |
| D 2002-2005 | 030-314002-10H | D SILICON 1N4002-F T52 100/1A |
| IC2301 | 033-404142-16 | IC STK4142-2 |
| J 2301 | 061-780243-00 | PIN J HSP-243V-06 3P |

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|---|---|---|
| L 2301/2351 | 004-285103-08 | COIL FIX2 202AK018A COILS 2R2K |
| L 2381(only AC-713R) | 084-070410-00 | COIL BALUM OPW 15-8-14-5H2 |
| P 2301 | 060-403001-17 | PLUG RTB-1.5-3P 3P |
| P 2302 | 060-107205-27 | PLUG B7B-PH-K WHT 7P |
| R 2309/2359 | 013-100305-75 | R OMF H S12 FLR ERG1SP 1W 100J |
| R 2310/2360 | 013-560305-75 | R OMF H S12 FLR ERG1SP 1W 560J |
| R 2312/2362 | 013-108410-51 | R CT P F09 PLATE 2W R10K |
| TR2301-2303/2351-2353 | 031-232458-25V | TR 2SC2458 Y,GR T05 |
| F5 | ⚠ 082-223150-06 | FUSE TIME 218 250V 3.15A |
| F6 | ⚠ 082-223150-06 | FUSE TIME 218 250V 3.15A |

**6. P.C. BOARD BLOCK**

| REF. NO. | PARTS No. | DESCRIPTION |
|---|---|---|
| 1-a(AC-510 B1/E1/E3) | 771-385101-01 | CD/TUNER/TAPE P.C. BOARD |
| 1-b(AC-510 S1) | 771-385101-02 | CD/TUNER/TAPE P.C. BOARD |
| 1-c(AC-513R E1) | 771-385101-03 | CD/TUNER/TAPE P.C. BOARD |
| 1-d(AC-515K U5/U8/Y6) | 771-385101-04 | CD/TUNER/TAPE P.C. BOARD |
| 1-e(AC-515K Y7) | 771-385101-05 | CD/TUNER/TAPE P.C. BOARD |
| 2-a(AC-510 B1/E1) | 771-385101-06 | KEY/DISPLAY P.C. BOARD |
| 2-b((AC-510 S1) | 771-385101-07 | KEY/DISPLAY P.C. BOARD |
| 2-c(AC-513R E1) | 771-385101-08 | KEY/DISPLAY P.C. BOARD |
| 2-d(AC-515K U5/U8/Y6) | 771-385101-09 | KEY/DISPLAY P.C. BOARD |
| 2-e(AC-515K Y7) | 771-385101-10 | KEY/DISPLAY P.C. BOARD |
| 3-a(AC-510 B1/E1/E3/A3) | 771-385101-11 | POWER AMP/MAIN P.C. BOARD |
| 3-b(AC-510 S1) | 771-385101-12 | POWER AMP/MAIN P.C. BOARD |
| 3-c(AC-513R E1) | 771-385101-13 | POWER AMP/MAIN P.C. BOARD |
| 3-d(AC-515K U5/U8/Y6/Y7) | 771-385101-14 | POWER AMP/MAIN P.C. BOARD |
| 4(for TX-410/510/610/710 of all version) | 771-385601-13 | REMOTE P.C. BOARD |
| 5-a(AC-710 B1/E1/E3) | 771-385201-01 | CD/TUNER/TAPE P.C. BOARD |
| 5-b(AC-710 S1) | 771-385201-02 | CD/TUNER/TAPE P.C. BOARD |
| 5-c(AC-713R E1) | 771-385201-03 | CD/TUNER/TAPE P.C. BOARD |
| 5-d(AC-715K U5/U8/Y6) | 771-385201-04 | CD/TUNER/TAPE P.C. BOARD |
| 5-e(AC-715K Y7) | 771-385201-05 | CD/TUNER/TAPE P.C. BOARD |
| 6-a(AC-710 B1/E1/E3) | 771-385201-06 | KEY/DISPLAY P.C. BOARD |
| 6-b((AC-710 S1) | 771-385201-07 | KEY/DISPLAY P.C. BOARD |
| 6-c(AC-713R E1) | 771-385201-08 | KEY/DISPLAY P.C. BOARD |
| 6-d(AC-715K U5/U8/Y6) | 771-385201-09 | KEY/DISPLAY P.C. BOARD |
| 6-e(AC-715K Y7) | 771-385201-10 | KEY/DISPLAY P.C. BOARD |
| 7-a(AC-710 B1/E1/E3/A3) | 771-385201-11 | POWER AMP/MAIN P.C. BOARD |
| 7-b(AC-710 S1) | 771-385201-12 | POWER AMP/MAIN P.C. BOARD |
| 7-c(AC-713R E1) | 771-385201-13 | POWER AMP/MAIN P.C. BOARD |
| 7-d(AC-715K U5/U8/Y6/Y7) | 771-385201-14 | POWER AMP/MAIN P.C. BOARD |

**7. YMCO3 P . C . BOARD**

| REF . NO . | PART NO . | DESCRIPTION |
|---|---|---|
| D4410 | 030-600048-00 | D LED GL4800 |
| TR4410 | 031-594800-00 | TR PHOTO PT4800 |
| J4410 | 060-405124-99 | SOCKET 006216023100 5P |
| J4411 | 060-405123-99 | SOCKET 006216023808 5P |

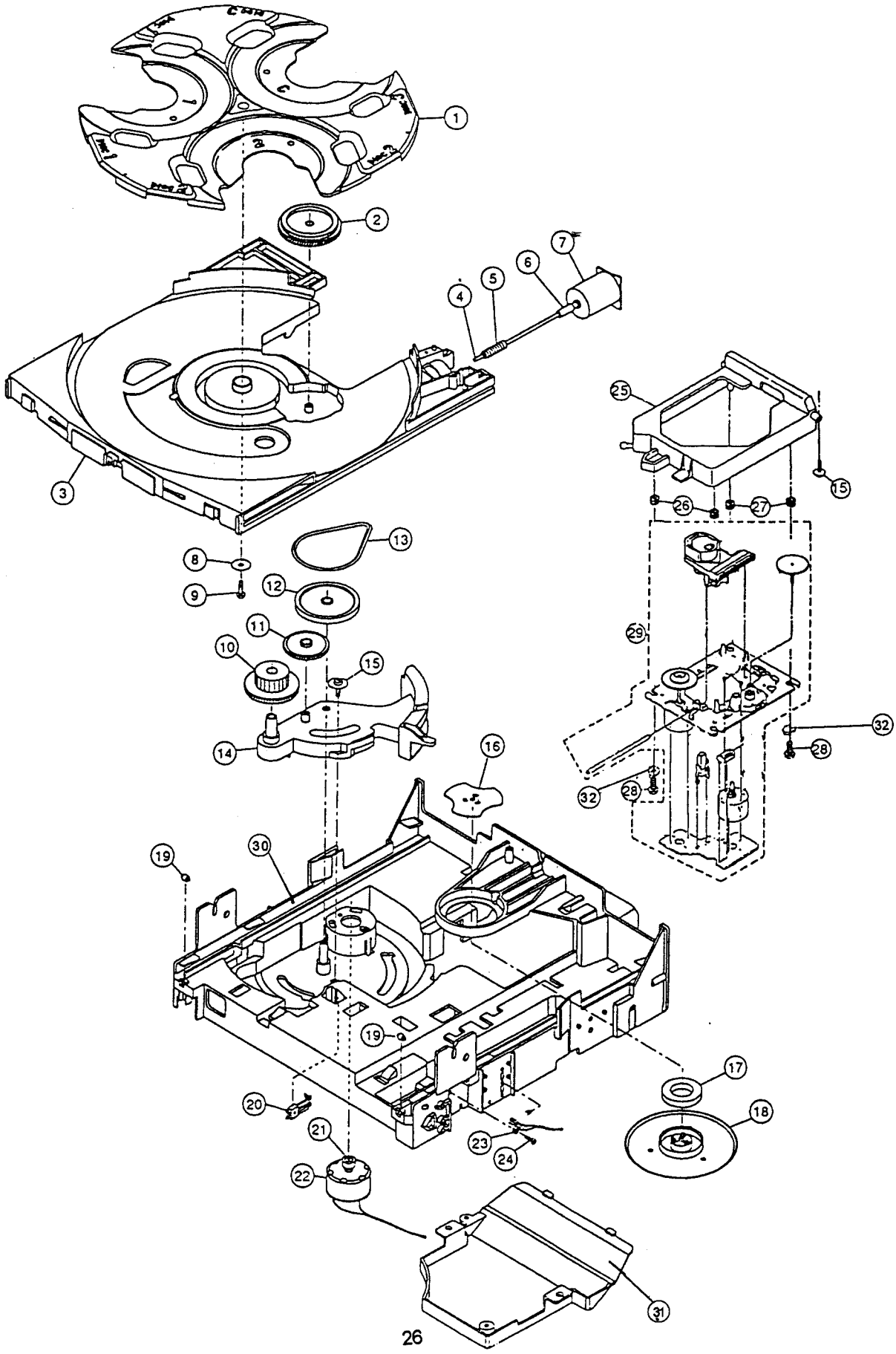
**8. ACCESSARY**

| REF. NO. | PART No. | DESCRIPTION |
|---|---|---|
| 1 | 790-010101-01 | REMOCON RC-S610 |
| 2 | 790-010102-01 | REMOCON RC-S510 |

## 9. CD MECHANISM

| REF. NO. | PARTS NO. | DESCRIPTION |
|---|---|---|
| 1 | 229-385602-01S | HOLDERDISC |
| 2 | 288-385601-01Z | GEAR WORMWHEEL TABLE |
| 3 | 220-385602-01S | TRAY LOADING |
| 4 | 438-385601-01 | SHAFT |
| 5 | 288-385604-01Z | WORM |
| 6 | 239-385601-01Z | JOINT |
| 7 | 743-037012-54 | MOTOR PF-370CA-15370 12V |
| 8 | 634-150030-08 | PW30X150X080 THK |
| 9 | 619-300208-00 | TAPING SCREW 3X1.25X8mm |
| 10 | 288-385605-01Z | GEAR LOADING (A) |
| 11 | 288-385606-01Z | GEAR LOADING(B) |
| 12 | 288-385602-01Z | PULLEY GEAR |
| 13 | 334-385604-01 | BELT LOADING |
| 14 | 288-385603-01S | HOLDER GEAR |
| 15 | 615-300308-00 | BW/T 3X8mm |
| 16 | 428-385603-01 | PLATE CLAMPER |
| 17 | 489-383801-01 | MAGNET DISC CLAMP |
| 18 | 229-385606-01S | CLAMPER |
| 19 | 259-385602-01Z | ROLLER |
| 20 | 047-102127-00 | LEAF SWITCH LSA-2127E |
| 21 | 243-385601-01Z | PULLEY |
| 22 | 743-050009-54 | MOTOR RF-500TB-14415 D/V |
| 23 | 047-101119-01 | LEAF SWITCH ISA-1119H |
| 24 | 610-260208-10 | R/T 2.6X8mm |
| 25 | 220-385601-01S | HOLDER TRAVERSE |
| 26 | 334-385606-01 | INSULATOR |
| 27 | 334-385606-01 | INSULATOR |
| 28 | 610-200216-00 | SELF-SCREW TAPING B/T 2.0X16 |
| 29 | 747-021301-02 | MECHA TRAVERSE KSM213CCM |
| 30 | 220-385603-01R | CHASSIS MAIN |
| 31 | 219-385601-01Z | CD MECH COVER |
| 32 | 634-100027-05 | METAL WASHER 10X2.7X0.5 |

CD MECHANISM BLOCK



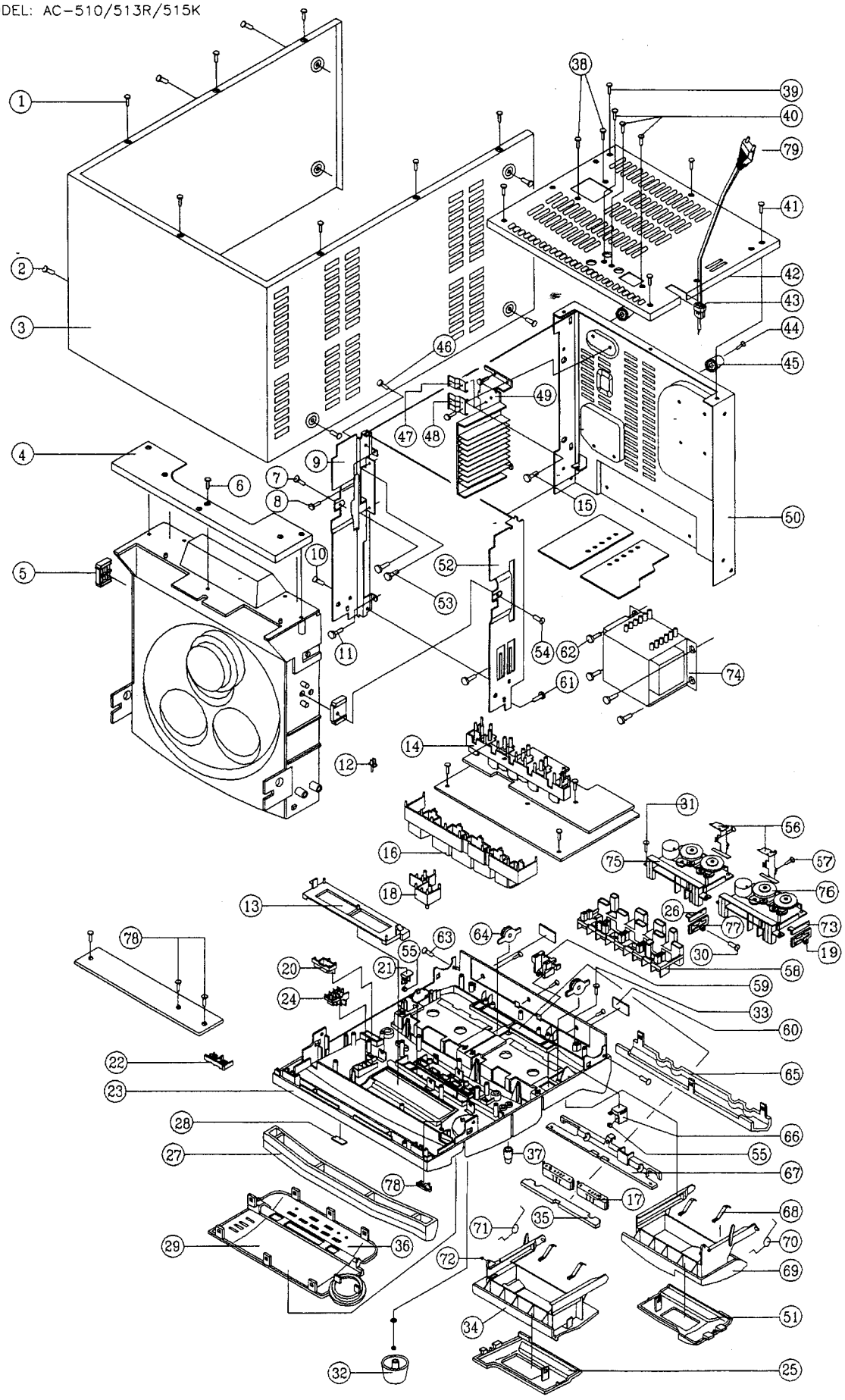
## 10. AC-510/513R/515K

| REF. NO. | PARTS NO. | DESCRIPTION |
|---|---|---|
| 1 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 2 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 3 | 402-385002-01 | MAIN COVER BLACK |
| 4 | 495-385017-01 | REAR CABINET SUB |
| 5 | 284-385001-01R | MECH SPACER BLACK HI-PS |
| 6 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 7 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 8 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 9 | 428385001-01 | CD BRACKET ' L ' |
| 10 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 11 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 12 | 292-385002-01S | DOLABY BUTTON ( A ) |
| 13 | 229-385011-01R | FLD BRACKET HI-PS |
| 14 | 291-385014-01S | FUNCTION BUTTON ABS |
| 15 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 16 | 291-385005-01Z | CD FUNCTION BUTTON ( B ) ABS+PC |
| 17 | 250-385001-01S | LAMP HOLDER WHITE ABS |
| 18 | 292-385001-01S | REC BUTTON BLACK ABS |
| 19 | 259-385004-01Z | INTERLOCK ' R ' POM |
| 20 | 291-385001-01S | POWER BUTTON BLACK ABS |
| 21-a | 229-385006-01Z | LATCH BRACKET BLACK POM |
| 21-b | 229-385001-01Z | LATCH BRACKET (L) POM |
| 22 | 291-385002-01S | CD FUNCTION BUTTON ( A ) |
| 23-a(AC-510) | 200-385011-02R | FRONT CABINET HI-PS |
| 23-b(AC-513R) | 200-385011-04R | FRONT CABINET HI-PS |
| 23-c(AC-515K) | 200-385013-02R | FRONT CABINET HI-PS |
| 24 | 275-385001-01S | TIMER BUTTON BLACK ABS |
| 25 | 261-385001-01K | CASS DOOR LENS ( L ) SMOKE |
| 26 | 259-385001-01S | INTERLOCK HOLDER ' L ' ABS |
| 27 | 219-385002-01R | CD DOOR HI-PS |
| 28 | 286-385001-01S | NAME PLATE ' AKAI ' |
| 29 | 263-385001- 01K | DISPLAY LENS AS |
| 30 | 601-264506-60A | TAPPING SCREW FLAT HEAD 2.6X6MM |
| 31 | 619-300312-00 | TAPPING SCREW P TYPE FLAT HEAD 3X6MM |
| 32 | 273-385001-01S | VOLUME KNOB ABS |
| 33 | 619-300306-00 | TAPING SCREW P TYPE FLAT HEAD 3X6MM |
| 34 | 211-385011-01S | CASS DOOR ( L ) HI-PS |
| 35 | 263-385003-01L | DIR LENS CLEAR ACRYLIC |
| 36 | 234-385011-01K | CONTORL SUB PANEL AS |
| 37 | 273-385002-01S | MIC KNOB BLACK ABS |
| 38 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 39 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 40 | 614-300208-00 | SELF-TAPPING SCREW B/T 3X8MM BLACK |
| 41 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 42-a(AC-510 E1,B1,E3) | 495-385001-02 | PANEL REAR |
| 42-b(AC-510 S1) | 495-385001-04 | PANEL REAR |
| 42c(AC-513R RE1) | 495-385001-06 | PANEL REAR |
| 42-d(AC-515K U5,Y6) | 495-385002-02 | PANEL REAR |
| 42-e(AC-515K U8,Y7) | 495-385002-04 | PANEL REAR |
| 43 | 650-381301-01 | CORD BUSHING |
| 44 | 619-300408-00 | TAPING SCREW B/T WASHER 3X8MM BLACK |
| 45 | 207-385101-01Z | REAR FOOT (PLASTIC) BLACK EVA |
| 46 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 47 | 428-385003-01 | HOLDER BRACKET SECC-E20 T=1 |
| 48 | 428-385001-01 | HOLDER BRACKET ( H ) |

| | | |
|---|---|---|
| 49 | 481-385101-01 | HEAT SINK ( H ) |
| 50 | 493-385102-01 | METAL BOTTOM CABINET |
| 51 | 261-385002-01K | CASS DOOR LENS ( R ) SMOKE |
| 52 | 428-385002-01 | CD BRACKET ' R ' |
| 53 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 54 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 55 | 477-385011-01 | LATCH PUSH SPRING |
| 56 | 483-385001-01 | DECK SHIELD COVER |
| 57 | 604-264501-00A | TAPPING SCREW C TYPE BID 2.6X5MM |
| 58 | 229-385014-01S | LED BRACKET WHITE ABS |
| 59 | 229-385007-01S | HOLDER LID BRACKET BLACK ABS |
| 60 | 330-385001-01 | FRONT CUSHION FOOT |
| 61 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 62 | 602-407008-60A | TAPPING SCREW P TYPE WASHER H 4X8MM |
| 63 | 619-300212-00 | TAPPING SCREW P TYPE BID H 3X12MM |
| 64 | 703-385002-01 | DAMPER DA-60W/W ( 105 ) ASSEMBLY |
| 65 | 263-385002-01K | DECK DIR LENS AS |
| 66-a | 229-385006-01Z | LATCH BRACKET BLACKPOM |
| 66-b | 229-385002-01Z | LATCH BRACKET (R) POM |
| 67 | 229-385003-01S | DECK DIR BLACK ABS |
| 68 | 470-385001-01 | CASS DOOR SPRING SHEET |
| 69 | 211-385012-01S | CASS DOOR ( R ) HI-PS |
| 70 | 471-385012-01 | CASS DOOR SPRING WIRE ( R ) |
| 71 | 471-385011-01 | CASS DOOR SPRING WIRE ( L ) |
| 72 | 259-385005-01S | STUD (BOSS LID ) BLACK ABS |
| 73 | 259-385002-01S | INTERLOCK HOLDER ' R ' ABS |
| 74-a(AC-510/513R) | 001-863851-42 | ⚠ POWER TRANSFORMER C1048E |
| 74-b(AC-515K) | 001-863851-02 | ⚠ POWER TRANSFORMER C1048-U |
| 75 | 741-490065-09 | LOGICAL CONTROL DECK MECHA CMAL2Z065A |
| 76 | 471-490066-09 | LOGICAL CONTROL DECK MECHA CMAL2Z066A |
| 77 | 259-385003-01Z | INTRLOCK ' L ' POM |
| 78 | 619-300306-00 | TAPINET SCREW P TYPE FLAT HEAD 3X6MM |
| 79-a(except B1,Y6,S1) | 071-669078-00A | ⚠ AC LINE CORD VDE |
| 79-b(B1,Y6) | 071-449078-20 | ⚠ AC LINE CORD BS |
| 79-c(S1) | 071-559078-10 | ⚠ AC LINE CORD SAA |

FINAL ASSEMBLY BLOCK

MODEL: AC-510/513R/515K



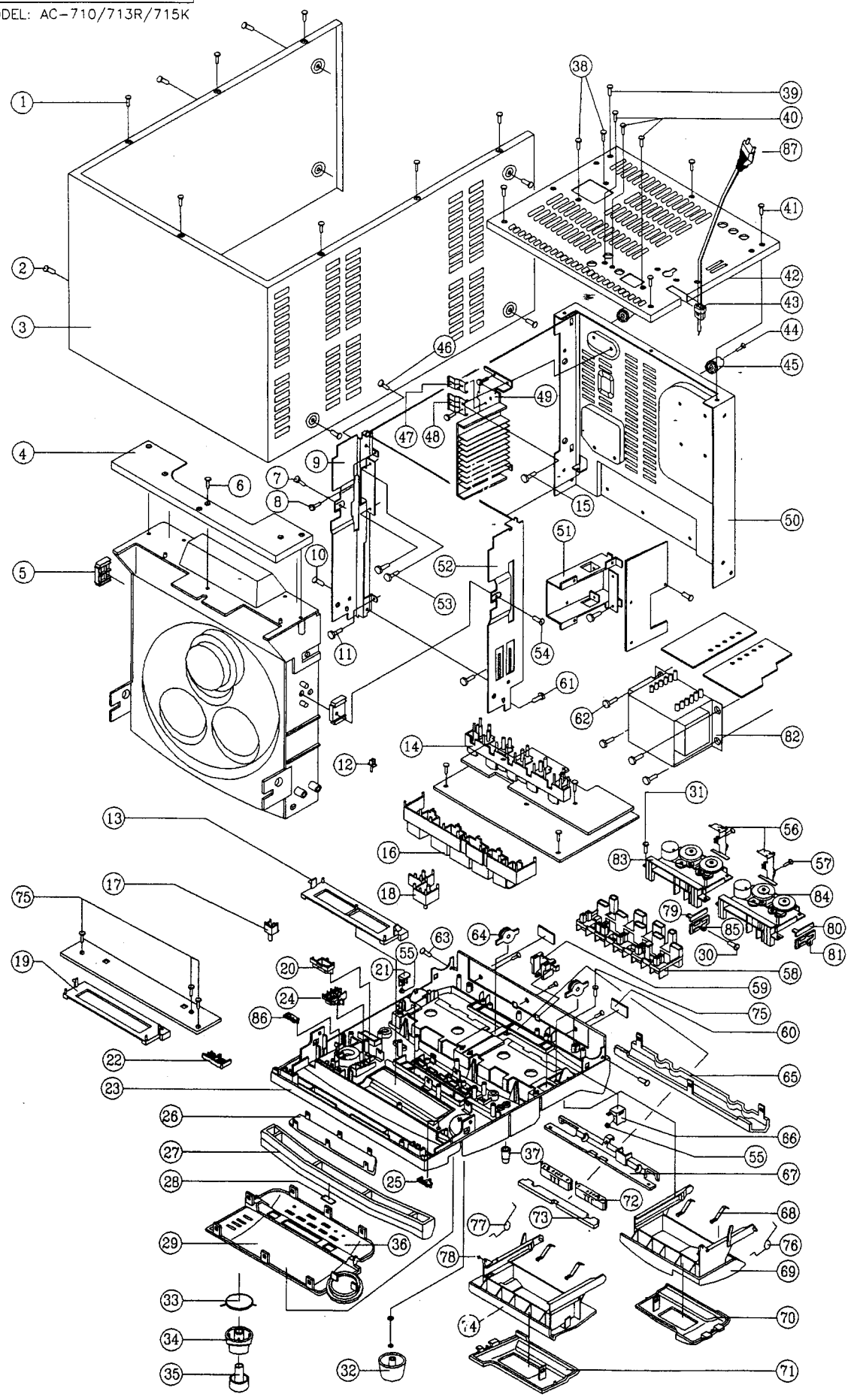
## 11. AC-710/713R/715K

| REF. NO. | PARTS NO. | DESCRIPTION |
|---|---|---|
| 1 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 2 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 3 | 402-385002-01 | MAIN COVER BLACK |
| 4 | 495-385017-01 | REAR CABINET SUB |
| 5 | 284-385001-01R | MECH SPACER BLACK HI-PS |
| 6 | 619-300208-00 | TAPING SCREW P TYPE BID H 3X8MM BLACK |
| 7 | 619-300208-00 | TAPPING SCREW P TYPE BID H 3X8MM BLACK |
| 8 | 619-300208-00 | TAPPING SCREW P TYPE BID H 3X8MM BLACK |
| 9 | 428-385001-01 | CD BRACKET 'L' |
| 10 | 619-300208-00 | TAPPING SCREW P TYPE BID H 3X8MM BLACK |
| 11 | 619-300208-00 | TAPPING SCREW P TYPE BID H 3X8MM BLACK |
| 12 | 292-385002-01S | DOLABY BUTTON ( A ) |
| 13 | 229-385011-01R | FLD BRACKET HI-PS |
| 14 | 291-385014-01S | FUNCTION BUTTON ABS |
| 15 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 16 | 291-385005-01Z | CD FUNCTION BUTTON ( B ) ABS+PC |
| 17 | 292-385002-01S | DOLBY BUTTON ( A ) ABS |
| 18 | 292-385001-01S | REC BUTTON BLACK ABS |
| 19 | 229-385201-01R | FLD BRACKET HI-PS |
| 20 | 291-385001-01S | POWER BUTTON BLACK ABS |
| 21-a | 229-385006-01Z | LATCH BRACKET BLACK POM |
| 21-b | 229-385001-01Z | LATCH BRACKET (L) POM |
| 22 | 291-385002-01S | CD FUNCTION BUTTON ( A ) |
| 23-a(AC-710) | 200-385211-01R | FRONT CABINET HI-PS |
| 23-b(AC-713R) | 200-385211-02R | FRONT CABINET HI-PS |
| 23-c(AC-715K) | 200-385212-01R | FRONT CABINET HI-PS |
| 24 | 275-385001-01S | TIMER BUTTON BLACK ABS |
| 25 | 291-385003-01S | BALANCE BUTTON BLACK ABS |
| 26 | 263-385201-01K | PRO DISPLAY LENS WINE SMOKE 'P-95012' AS |
| 27 | 219-385002-01R | CD DOOR HI-PS |
| 28 | 286-385001-01S | NAME PLATE 'AKAI' |
| 29 | 263-385001-01K | DISPLAY LENS AS |
| 30 | 601-264506-60A | TAPPING SCREW FLAT HEAD 2.6X6MM |
| 31 | 619-300312-00 | TAPPING SCREW P TYPE FLAT HEAD 3X6MM |
| 32 | 273-385001-01S | VOLUME KNOB ABS |
| 33 | 477-385211-01 | PRO TORSION SPRING |
| 34 | 292-385201-01S | PRO LOGIC KNOB BLACK ABS |
| 35 | 292-385212-01S | ON/OFF BUTTON MILKY WHITE 'SAA' - 5409T' |
| 36 | 234-385011-01K | CONTORL SUB PANEL AS |
| 37 | 273-385002-01S | MIC KNOB BLACK ABS |
| 38 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 39 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX8MM |
| 40 | 614-300208-00 | SELF-TAPPING SCREW B/T 3X8MM BLACK |
| 41 | 606A301208-00 | TAPING SCREW P TYPE BID H 3X1.25PX3MM |
| 42-a(AC-710 E1,B1,E3) | 495-385003-01 | PANEL REAR |
| 42-b(AC-710 S1) | 495-385003-02 | PANEL REAR |
| 42-c(AC-713R RE1) | 495-385003-03 | PANEL REAR |
| 42-d(AC-710K U5,Y6) | 495-385004-01 | PANEL REAR |
| 42-e(AC-715K U8,Y7) | 495-385004-02 | PANEL REAR |
| 43 | 650-381301-01 | CORA BUSHING |
| 44 | 619-300408-00 | TAPING SCREW BT WASHER H 3X8MM BLACK |
| 45 | 207-385101-01Z | REAR FOOT ( PLASTIC ) BLACK EVA |
| 46 | 619-300208-00 | TAPPING SCREW P TYPE BID H 3X8MM BLACK |
| 47 | 428-385003-01 | HOLDER BRACKET SECC-E20 T=1 |
| 48 | 428-385101-01 | HOLDER BRACKET ( H ) |

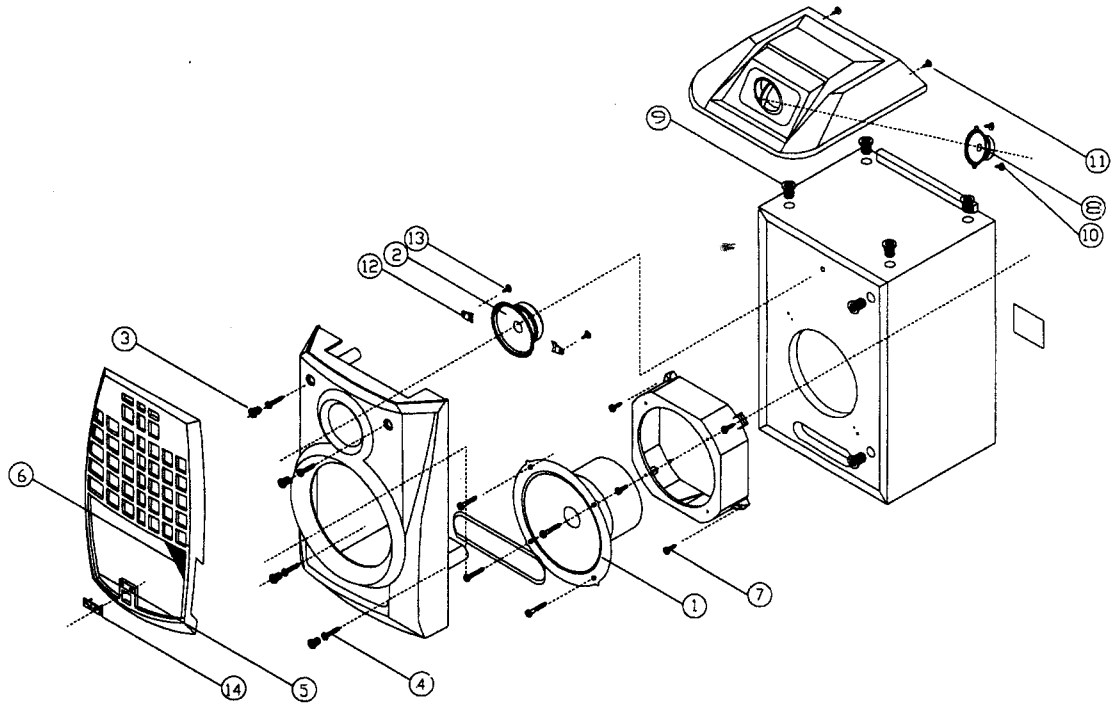
| | | |
|---|---|---|
| 49 | 481-385101-01 | HEAT SINK ( H ) |
| 50 | 493-385102-01 | METAL BOTTOM CAB |
| 51 | 481-385201-01 | HEAT SINK ( SUB ) |
| 52 | 428-385002-01 | CD BRACKET ' R' |
| 53 | 619-300208-00 | TAPPING SCREW P TYPE BID H 3X8MM BLACK |
| 54 | 619-300208-00 | TAPPING SCREW P TYPE BID H 3X8MM BLACK |
| 55 | 477-385011-01 | LATCH PUSH SPRING |
| 56 | 483-385001-01 | DECK SHIELD COVER |
| 57 | 604-264501-00A | TAPPING SCREW C TYPE BID H 2.6X5MM |
| 58 | 229-385014-01S | LED BRACKET WHITE ABS |
| 59 | 229-385007-01S | HOLDER LID BRACKET BLACK ABS |
| 60 | 330-385001-01 | FRONT CUSHION FOOT |
| 61 | 619-300208-00 | TAPPING SCREW P TYPE BID H 3X8MM BLACK |
| 62 | 602-407008-60A | TAPPING SCREW P TYPE WASHER H 4X8MM |
| 63 | 619-300212-00 | TAPING SCREW P TYPE BID H 3X12MM BLACK |
| 64 | 703-385002-01 | DAMPER DA-60W/W (105) ASSEMBLY |
| 65 | 263-385002-01K | DECK DIR LENS AS |
| 66-a | 229-385006-01Z | LATCH BRACKET BLACK POM |
| 66-b | 229-385002-01Z | LATCH BRACKET (R) POM |
| 67 | 229-385003-01S | DECK DIR BKT BLACK ABS |
| 68 | 470-385001-01 | CASS DOOR SPRING SHEET |
| 69 | 211-385012-01S | CASS DOOR ( R ) HI-PS |
| 70 | 261-385002-01K | CASS DOOR LENS ( R ) SMOKE |
| 71 | 261-385001-01K | CASS DOOR LENS ( L ) SMOKE |
| 72 | 250-385001-01S | LAMP HOLDER WHITE ABS |
| 73 | 263-385003-01L | DIR LENS CLEAR ACRYLIC |
| 74 | 211-385011-01S | CASS DOOR ( L ) HI-PS |
| 75 | 619-300306-00 | TAPING SCREW P TYPE FLAT HEAD 3X6MM |
| 76 | 471-385012-01 | CASS DOOR SPRING WIRE ( R ) |
| 77 | 471-385011-01 | CASS DOOR SPRING WIRE ( L ) |
| 78 | 259-385005-01S | STUD (BOSS LID) BLACK ABS |
| 79 | 259-385001-01S | INTERLOCK HOLDER 'L' ABS |
| 80 | 259-385002-01S | INTERLOCK HOLDER 'R' ABS |
| 81 | 259-385004-01Z | INTERLOCK 'R' POM |
| 82-a(AC-710/713R) | 001-953852-42 | ⚠ POWER TRANSFORMER C1049-E |
| 82-b(AC-715K) | 001-663852-42 | ⚠ POWER TRANSFORMER C1049-U |
| 83 | 741-490065-09 | LOGICAL CONTROL DECK MECHA CMAL2Z065A |
| 84 | 471-490066-09 | LOGICAL CONTROL DECK MECHA CMAL2Z066A |
| 85 | 259-385003-01Z | INTERLOCK 'L' POM |
| 86 | 291-385201-01S | MODE BUTTON BLACK ABS |
| 87-a(except B1,Y6,S1) | 071-669078-00A | ⚠ AC LINE CORD VDE |
| 87-b(B1,Y6) | 071-449078-20 | ⚠ AC LINE CORD BS |
| 87-c(S1) | 071-559078-10 | ⚠ AC LINE CORD SAA |

FINAL ASSEMBLY BLOCK

MODEL: AC-710/713R/715K

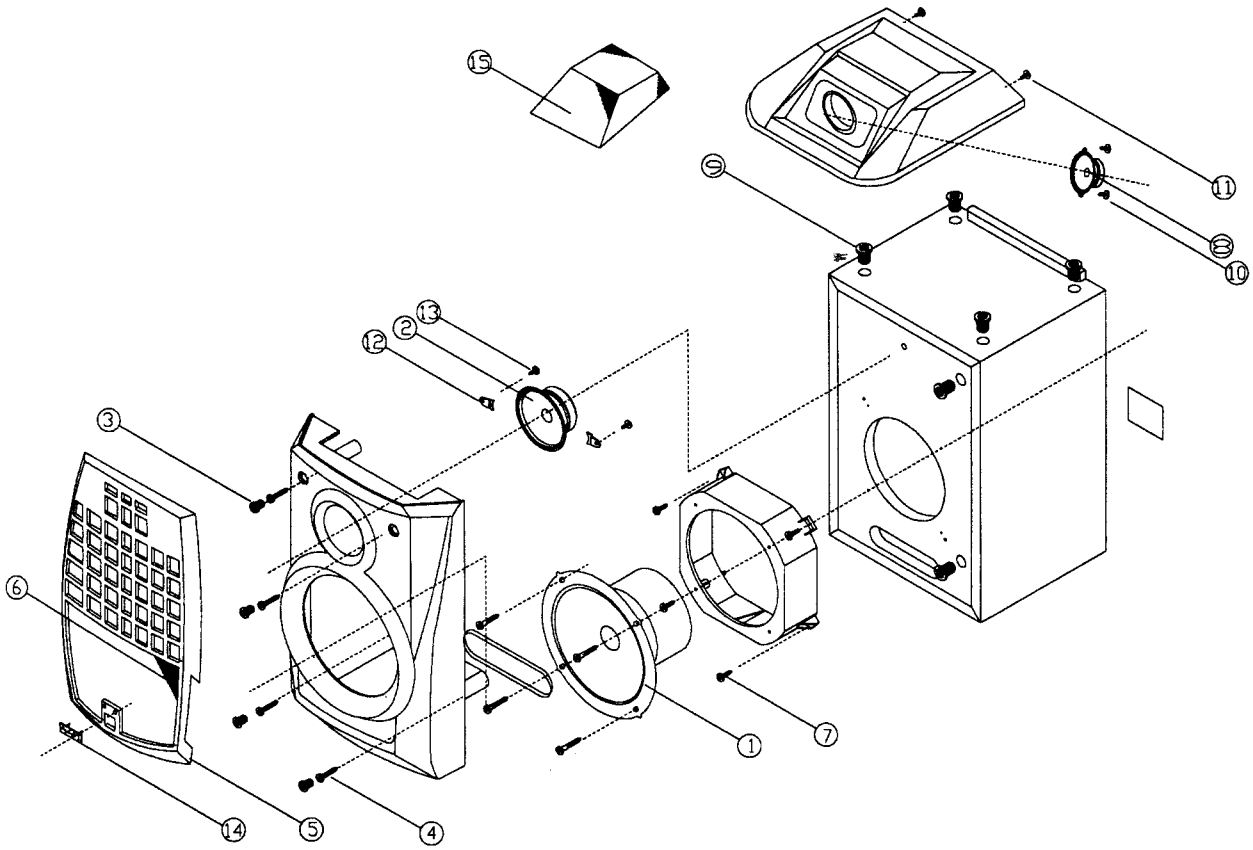


12. SPEAKER SYSTEM (SR-510)




| REF. NO | PART NO | DESCRIPTION |
|---|---|---|
| 1 | 066-959054-ST | BASS SPEAKER 5 1/4" 6Ω 100-160W |
| 2 | 066-272221-WT | MEDIA SPEAKER 2 1/2 8Ω 80-120W |
| 3 | 259-050201-01Z | CUSHION FOR SPEAKER BOX BLK S.B.R |
| 4 | 610-350220-10 | SELF-TAPPING SCREW R/T 3.5X20 WHITE |
| 5 | 239-050501-01R | ADAPTOR BLK PS |
| 6 | 583-050501-00F | SPEAK CLOTH (BLACK) |
| 7 | 614-400216-30 | SELF-TAPPING SCREW R/T 4.0X16 BLACK |
| 8 | 066-288220-WT | TREBLE SPEAKER 2 8Ω 80-120W |
| 9 | 259-381301-01 | CUSHION FOR SPEAKER BOX BLK RUBBER |
| 10 | 612-300106-10 | SELF-TAPPING SCREW 3X6MM WHITE |
| 11 | 611-300210-30 | SELF-TAPPING SCREW 3X10MM PLATING BLK |
| 12 | 462-333202-01 | SPEAKER CLIP |
| 13 | 612-300210-10 | SELF-TAPPING SCREW 3X10MM WHITE |
| 14 | 286-385002-01S | NAME PLATE FOR AKAI SPK BLK ABS |

13. SPEAKER SYSTEM (SR-710)




| REF. NO | PART NO | DESCRIPTION |
|---|---|---|
| 1 | 066-959054-ST | BASS SPEAKER 5 1/4" 6Ω 100-160W |
| 2 | 066-272221-WT | MEDIA SPEAKER 2 1/2 8Ω 80-120W |
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| 4 | 610-350220-10 | SELF-TAPPING SCREW R/T 3.5X20 WHITE |
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| 6 | 583-050501-00F | SPEAK CLOTH (BLACK) |
| 7 | 614-400216-30 | SELF-TAPPING SCREW R/T 4.0X16 BLACK |
| 8 | 066-289020-WT | TREBLE SPEAKER |
| 9 | 259-381301-01 | CUSHION FOR SPEAKER BOX BLK RUBBER |
| 10 | 612-300106-10 | SELF-TAPPING SCREW 3X6MM WHITE |
| 11 | 611-300210-30 | SELF-TAPPING SCREW 3X10MM PLATING BLK |
| 12 | 462-333202-01 | SPEAKER CLIP |
| 13 | 612-300210-10 | SELF-TAPPING SCREW 3X10MM WHITE |
| 14 | 286-385002-01S | NAME PLATE FOR AKAI SPK BLK ABS |
| 15 | 403-050601-01 | SPK GRILL FOR AKAI (SR710) |

# XII. ABBREVIATIONS

**TUNER**

| ABBREVIATION | EXPLANATION | ABBREVIATION | EXPLANATION |
|---|---|---|---|
| AFC | Auto Frequency Control | MEMO | MEMOry |
| AGC | Auto Gain Control | MI-COM | MIcro-COMputer |
| ALC | Auto Level Control | MIN | MINimum |
| AM | Amplitude Modulation | MIX | MIXing |
| AMP | AMPlifier | MPX | MultiPleX |
| ANT | ANTenna | MW | Medium Wave(frequency) |
| BATT | BATTery | NC | No Connection |
| BLK | BLocK | NFB | Negative Feed Back |
| BUFF | BuFFer | OSC | OSCillator |
| COMP | COMParator | PCB | Printed Circuit Board |
| DET | DETect(DETector) | PLL | Phase Locked Loop |
| FLD | FLuorescent Display | Q.D | Quadrature Detector |
| FM | Frequency Modulation | Rch | Right channel |
| FREQ | FREQuency | REF | REFerence |
| GND | GrouND | REG | REGulator |
| H | High | RF | Radio Frequency |
| HPF | High Pass Filter | SEG | SEGment |
| IF | Intermediate Frequency | SELE | SELEctor |
| IHF | Institut of High Fidelity | SENS | SENSitivity |
| IND | INDicator | SIG | SIGnal |
| I/O | In/Out | S/N | Signal to Noise Ratio |
| JW | Jumper Wire | SSG | Standard Signal Generator |
| L | Low | STD | STanDard |
| LCD | Liquid Crystal Display | SW | Switch: Short Wave(frequency) |
| LCH | Left CHannel | THD | Total Harmonic Distortion |
| LED | Light Emitting Diode | TP | Test Point |
| LPF | Low Pass Filter | VCO | Voltage Controlled Oscillator |
| LW | Long Wave (Frequency) | VR | Variable Resistor |
| XTAL | Crystal | | |

## COMPACT DISC

| ABBREVIATION | EXPLANATION | ABBREVIATION | EXPLANATION |
|---|---|---|---|
| A-D | Analog to Digital(Converter) | Mb | Mega Bits |
| ADC | Analog Code Decimal (Converter) | MDA | Mortor Drive Amplifier |
| BCD | Binaary Code Decimal | MFM | Modified Frequency Modulation |
| BPI | Bits Per Inch | MW | Mono-stable Multivibrator |
| CD | Compact Disc | M2FM | Modified Midified Frequency Modulation |
| CIRC | Cross Interleaving & Reed Solomon Coding | MOD2 | Modulo 2 (Addition) |
| | | MP | Microprocessor |
| CLV | Constant Linear Velocity | MSB | Most Significant Bit |
| CP | Clock Pulses | NA | Numerical Aperture |
| CRCC | Cyclic Redundancy Check Codes | NRZ | Non Return to Zero |
| D Level | Decision Level | NRZ-I | Non Return to Zero Inverted |
| D-A | Digital to Analog(Converter) | P | Parity Data |
| DAC | Digital to Analog(Converter) | PAM | Pulse Amplitude Modulation |
| DAD | Digital Audio Disc | PCM | Pulse Code Modulation |
| DEM | Dynamic Element Matching | PD | Phase Detector |
| DPD | Differential Phase Detection | PE | Phase Encode |
| DSV | Digital sum Value | PLL | Phase locked Loop |
| EFM | Eight to Fourteen Modulation | PNM | Pulse Number Modulation |
| EX-OR | Exclusive OR | PPM | Pulse Phase Modulation |
| FCI | Flux Changes per Inch | PWM | Pulse Width Midulation |
| FIR | Finite Impulse Response | Q | Parity Data |
| FP | Front Pluse | R,R1,R2,ect. | Data for Right Channel |
| FPG | Front Pluse Gate | RAM | Random Access Memory |
| F | Frequency of Sampling | RPG | Rear Pulse Gate |
| GF | Galois Field | SCOOP | Self Coupled Optical Pick-up |
| H&V(Parity) | Horizonal & Veertical | S&H | Sample & Hold |
| IIR | Infinite Impulse Response | S/N | Signal to Noise Ratio |
| KB | Kilo Bits | SSG | Standard Signal Generator |
| L,L1,L2,ect. | Data for Left Channel | SYSCON | SYStem CONtrol |
| LPF | Low Pass Filter | | |
| LSB | Least Significant Bit | | |

## CASSETTE

| ABBREVIATION | EXPLANATION | ABBREVIATION | EXPLANATION |
|---|---|---|---|
| AC | Alternating Current | MIN | MINite |
| A/D | Analog/Digital | MML | Maximum Modulation Level |
| AF | Auto Fader | MOL | Maximum Output Level |
| AMP | AMPlifier | MPX | MultiPlex |
| AR | Anti Recording | NC | Not connected (No Connection) |
| AT BIAS | Auto Turning BIAS | NFB | Negative Feed Back |
| ATT | ATTenuator | NORM | NORMal |
| BAL | BALance | NR | Noisse Reduction |
| BEFB | and Elimination Filter | OSC | OSCillator (OSCillation) |
| BSS | Blank Search System | P | Pulse |
| CAPM | CAPstan Motor | PB | Play Back |
| CH | CHannel | QMSS | Quick Memory Search Syatem |
| COMP | CoMParator | OR | Quick Reverse |
| CONT | CONTinuance | RCH | Right CHannel |
| CRLP | Computer Recording Level | REC | RECord (RECording) |
| | Processing | REV | REVerse |
| CS | Chip Select | ROT | ROTation |
| D/A | Digital/Analog | REW | REWind |
| DC | Direct Current | SEC | SECond |
| DET | DETector | SELE | SELEctor |
| DISCRU | DISCRIminator | SENS | SENSitivity |
| DUB | DUBbing | SEPP | Single Ended Push Pull |
| EQ | EQualizer | SIG | SIGnal |
| FF or (F.FWD) | Fast Foward | SPECT | SPECTrum |
| FLD | FLuoresent Display | STD | STanDard |
| FREQ | FREQuency | SW | SWitch |
| FWD | ForWarD | SYS | CONSYStem CONtrol |
| GND | GrouND | TP | TEST Point |
| H | High | TRIG | TRIGa |
| HPF | High Pass Filter | VCA | Voltage Control Attenuator |
| IND | INDicator | VOL | Volume |
| IPLS | Instant Program Location System | VOLT | VOLTage |
| L | Low | VR | Variable Resistor |
| LCH | Left Channel | XTAL | crysTAL |
| LEDLight | Emitting Diode | X1 | Normal speed |
| MEMO | MEMOry | X2 | Dubble speed |
| MICOM | MIcroCOMputer | | |

## AMPLIFIEER

| ABBREVIATION | EXPLANATION |
|---|---|
| A | Analog |
| AC | Alternating Current |
| AMP | AMPlifier |
| CD | Compact Disc |
| COM | COMmon |
| D | Digital |
| D/A | Digital to Analog |
| DAC | Digital to Analog Converter |
| DAT | Digital Audio Tape recorder |
| DC | Direct Current |
| GND | GrouNd |
| L | Left |
| LED | Light Emitting Diode |
| MC | Moving Coil |
| MM | Moving Magnet |
| PCB | Printed Circuit Board |
| R | Right |
| REG | REGulator |
| REC | RECord |
| TR | TRansistor |
| SW | SWitch |
| V.AMP | Voltage AMPlifier |
| V.DISC | Video DISC |
| VR | Variable Resistance |
| VTR | Video Tape Recorder |

# AKAI

## MODEL AC-510, 513R, 515K
## MODEL AC-710, 713R, 715K

# SCHEMATIC DIAGRAMS AND PC BOARDS

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I. BLOCK DIAGRAMS
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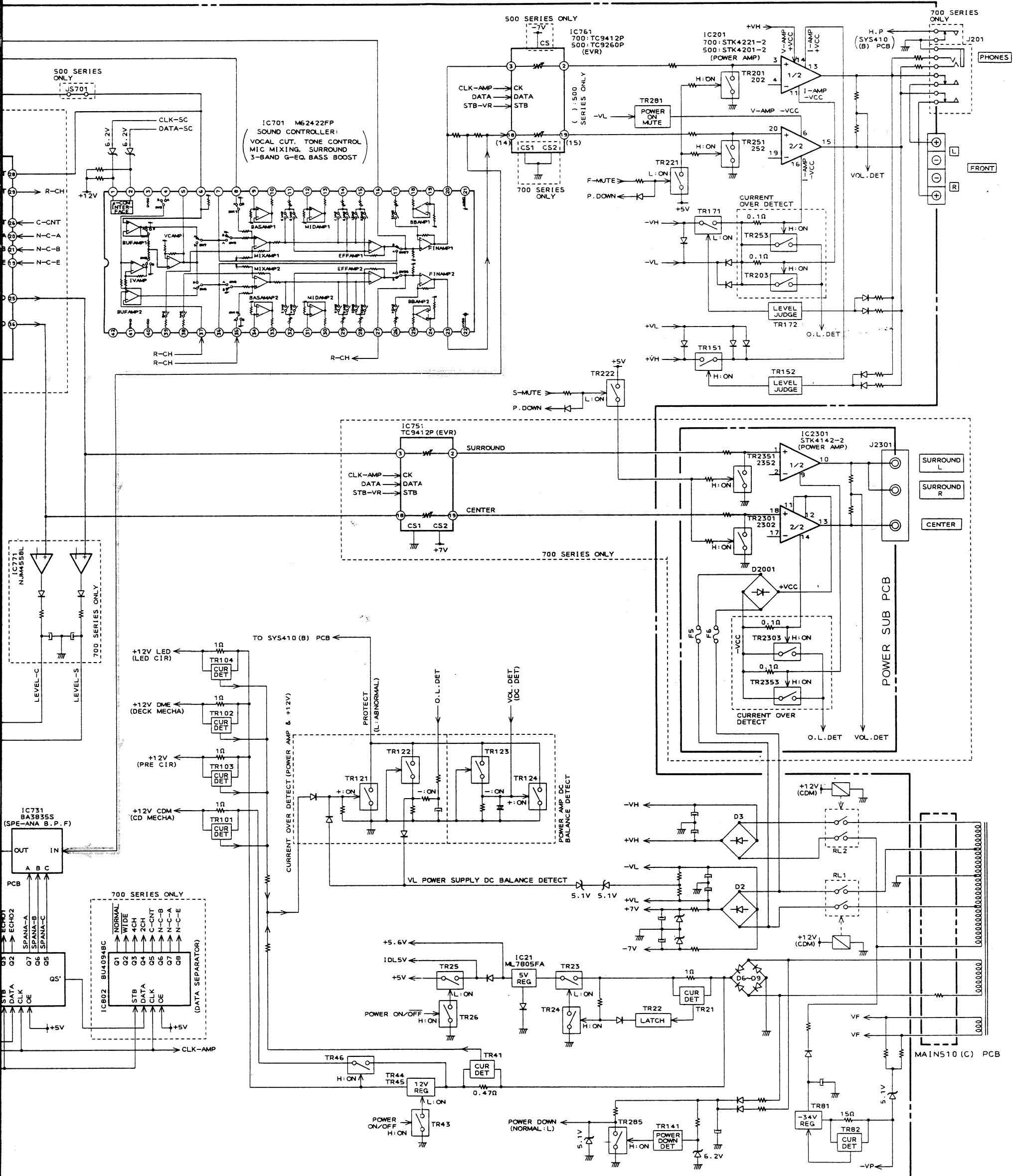
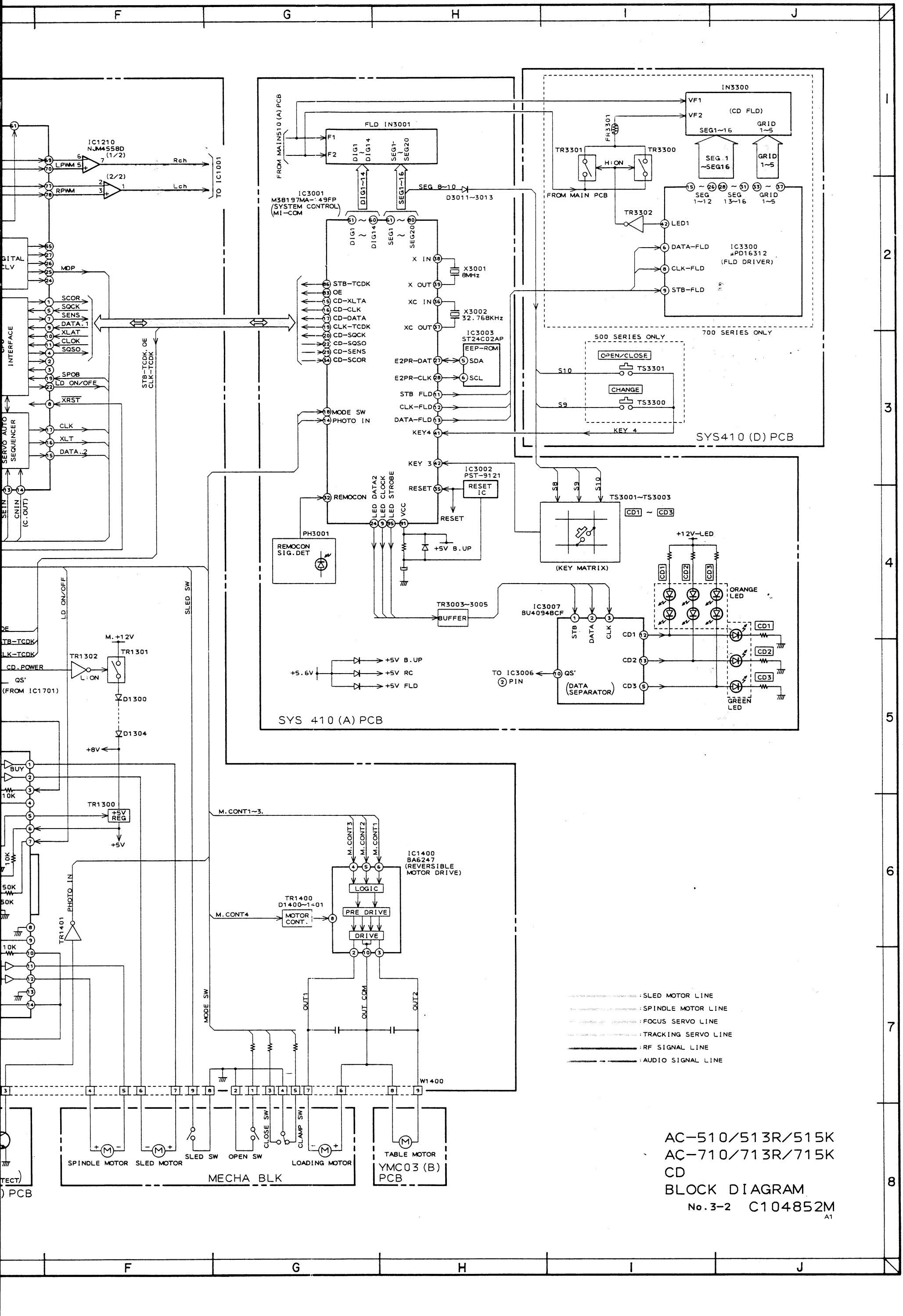
Use these schematic diagrams and PC boards together with the provided service manual.

A
B
C
D
E
1
2
3
4
5
6
7
8
J1001
AUX
L
R
R-CH
TAPE DECK
TUNER
CD
IC1001
MC14052BCP
0Y
1Y
2Y
3Y
YC
A
B
IC1002 (1/2)
NJM4558L
SEL.A
SEL.B
TC-DK (A) PCB
IC3004
TA2011S
MIXING
(MIC AMP)
VR3001
MIC 1
MIC 2
515K, 715K ONLY
SYS410 (A) PCB
MIC ON/OFF
PROTECT
H.P
S5
TR3123
TR3122
TR3121
K3
K2
K1
SYS410 (B) PCB
IC581 (1/2)
NJM4558L
IC581 (2/2)
R-CH
715K ONLY
TR539
DELAY
H:ON
JS551
515K ONLY
515K
715K
ONLY
TR540
L:ON
DELAY
JS502
710, 713R
ONLY
LPF
TR534
ECHO1
ECHO2
515K, 715K ONLY
DELAY
TR531
TR551
TR552
TR532
TR533
TR536
JS552
TR535
4.7K
LPF1
COMP
OP1
MOD
DEM
OP2
LPF2
REF
1/2 VCC
AUTO RESET
OSCILLATOR
D1
RESET
CLOCK
DO0
DO1
MAIN CONTROL
DELC
MO
M1
10K SRAM
IC501 M65843AFP
(DIGITAL ECHO)
EXCEPT 510, 513R
X551
400KHz
2M
L700
SERIES ONLY
TR537
TR538
JS553
JS501
710, 713R ONLY
700 SERIES ONLY
700 SERIES ONLY
5V
4CH H:ON
2CH H:ON
TR603
TR604
TR602
WIDE
L:ON
TR601
NORMAL
VREF
MODE-CNT
C-MODE
R-AB-I
L-AB-I
L OUT
R OUT
R-CH
C-CNT
N-C-A
N-C-B
N-C-E
IC602
NJM2177AF
(DOLBY PRO-LOGIC)
(DECODER)
S.O
C.O
7KHz LPF
NR-IN
SX-O
IC771
NJM4558L
LEVEL-C
LEVEL-S
IC731
BA3835S
(SPE-ANA B.P.F)
OUT
IN
A B C
TO TC-DK (A) PCB
SPANA
CLK-DSK
DATA-DSC
CLK-SC
DATA-SC
IC3001:
M38197MA-149FP
(OPERATION & SYSTEM)
(CONTROL MI-COM)
STB-VR
STB-AMP
DATA
CLK-AMP
OE
STB-PRE
POWER DOWN
IC101 BU4094BC
(DATA SEPARATOR)
IC801 BU4094BC
(DATA SEPARATOR)
POWER ON/OFF
F-MUTE
S-MUTE
DELAY
SEL-A
SEL-B
I-MUTE-S
ECHO1
ECHO2
SPANA-A
SPANA-B
SPANA-C
STB
DATA
CLK
OE
QS'
+5V
SYS410 (A) PCB
MAIN510 (A) PCB
NORMAL SIGNAL LINE (L-CH)
EFFECT SIGNAL LINE (DELAY & D.P.L)
MIC SIGNAL LINE
CENTER & SURROUND SIGNAL LINE



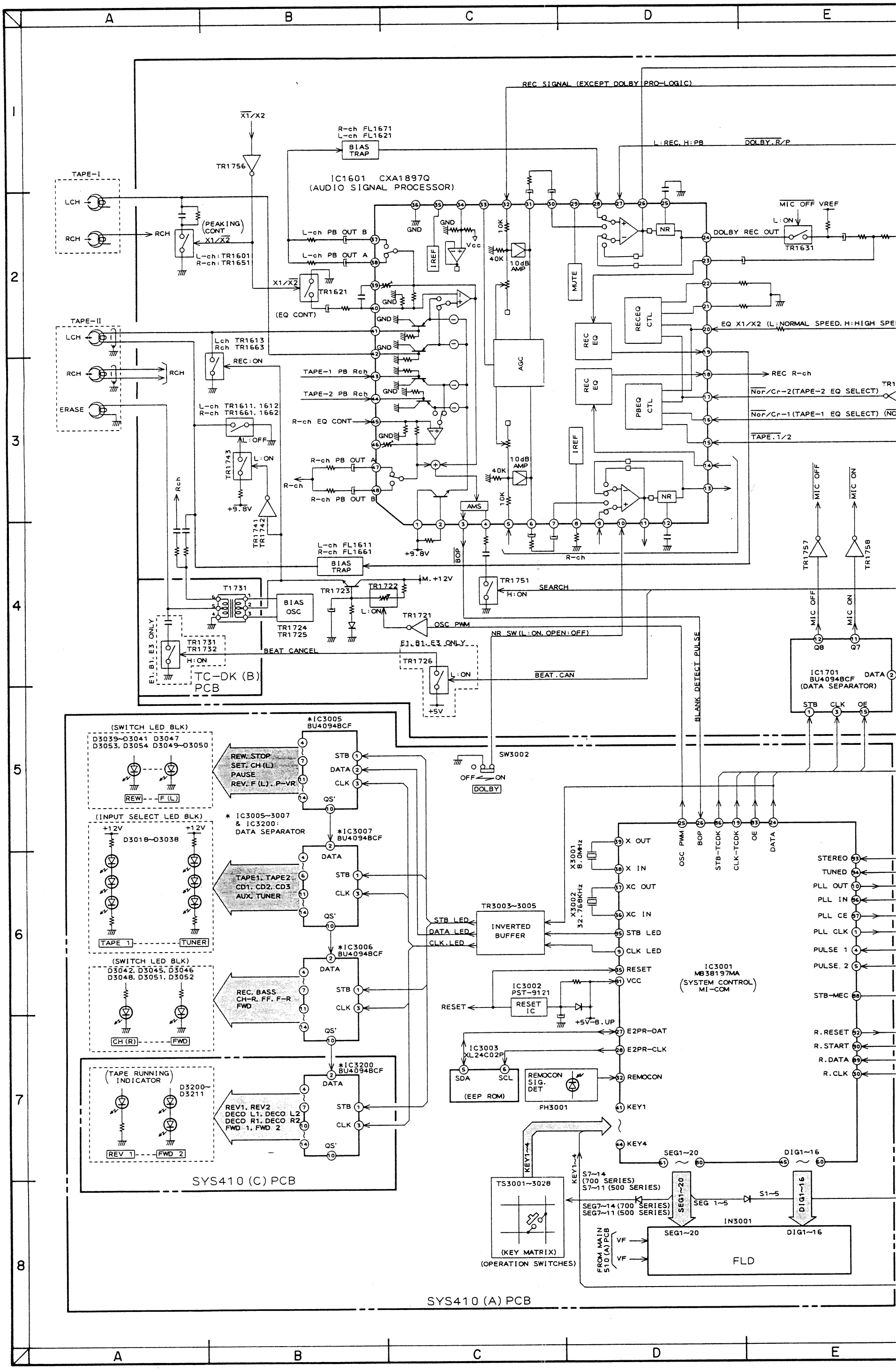

AC-510/513R/515K
AC-710/713R/715K
MAIN
BLOCK DIAGRAM
No.3-1 C104851M
A1

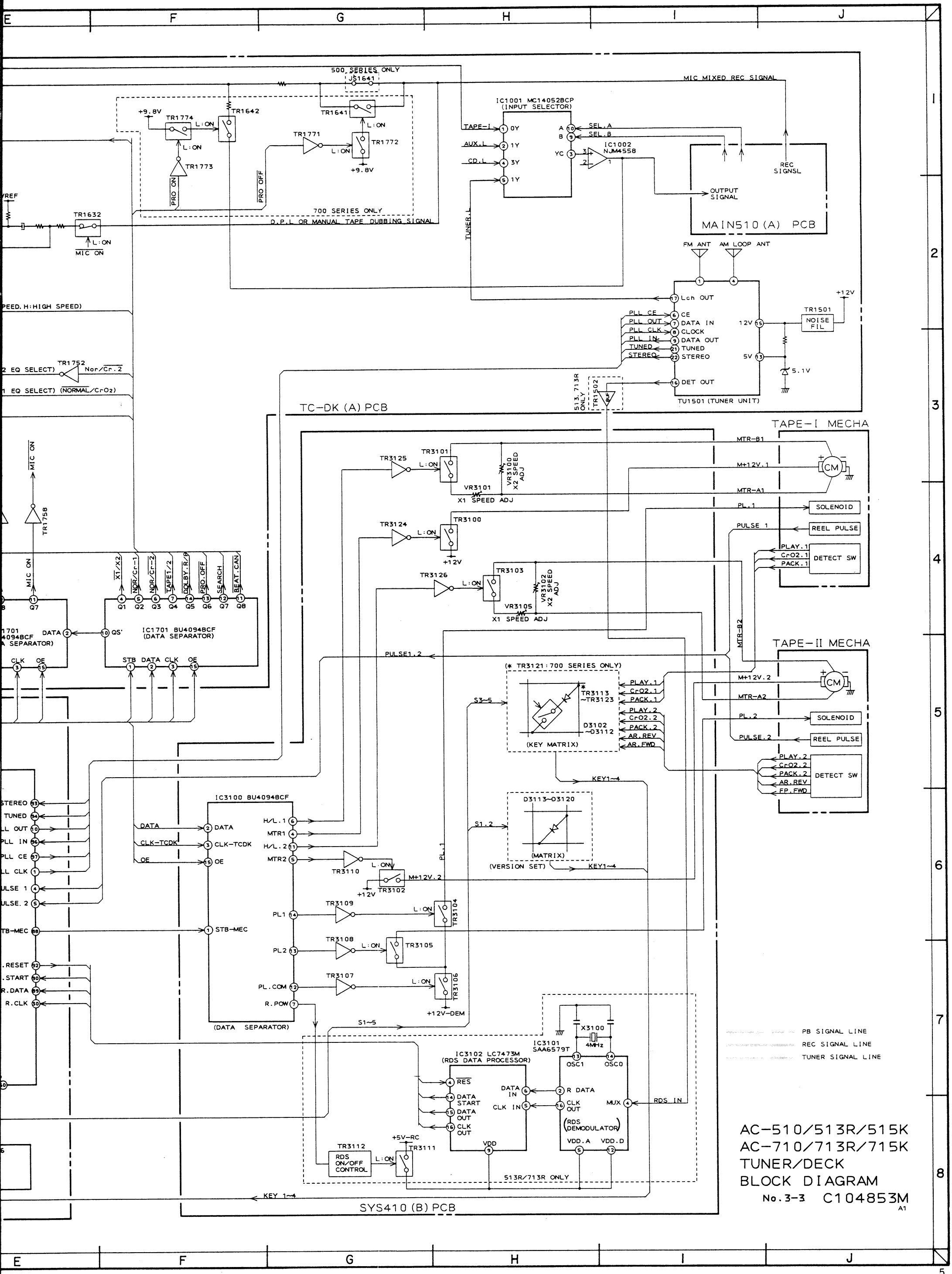
X1200
16.9344MHz
IC1200 CXD2508AQ
(DIGITAL SIGNAL PROCESSOR)
DIGITAL FILTER + 1BIT DAC
D/A INTERFACE
DIGITAL OUT
DIGITAL CLV
ERROR CORRECTOR
16K RAM
EFM DEMODULATOR
SUB CODE PROCESSOR
CPU INTERFACE
CLOCK GENERATOR
ASYMMETRY CORRECTOR
DIGITAL PLL
SERVO AUTO SEQUENCER
SLED SW
RF
FOK
SEIN
CNIN
(C.OUT)
IC1100
CXA1782BQ
(RF I-V AMP/RF AMP)
FOCUS DRIVE
FS4
DFCT
FS2
FS1
F SET
TG2
TA-M
TA-O
ATSC
WINDOW COMP.
TM1
FCS PHASE COMPENSATION
TM7
TM3
TM4
TM2
TM5
TM6
SL-O
I SET
TZC COMP
TG1
TRACKING PHASE COMPENSATION
TRACKING DRIVE
HPF COMP
LPF COMP
TE AMP
E IV AMP
F IV AMP
FE AMP
FZC COMP
+5V
CLK
XLT
DATA.2
XRST
C.OUT (CNIN)
SENS
OUTPUT DECODER
IIL DATA REGISTER
INPUT SHIFT REGISTER
ADDRESS.DECODER
FE-BIAS
VR1200
FOCUS OFF-SET
RF IV AMP2
RF IV AMP1
APC
LEVEL S
MIRR
DFCT
FOK
RF-O
VREF
PHD2
PHD1
PHD
LD
RF-M
RF-I
MONITOR
TR1100
PICK-UP KSS-213C
FOCUS COIL
TRACKING COIL
M.CONT1
M.CONT2
M.CONT3
M.CONT4
XSRT
IC1702
BU4094BCF
(DATA SEPARATOR)
OE
STB
CLK
Q5
DATA
STB-TCDK
CLK-TCDK
CD.POWER
QS'
(FROM IC1701)
SLED DRIVE
IC1300 KA92580
(MOTOR DRIVE)
LEVEL SHIFT
BUY
10K
T.S.D
REGULATOR
MUTE
50K
+8V
MDP
W1401
(TURN TABLE POSITION DETECT)
YMC03 (A) PCB
TC-DK (A) PCB




AC-510/513R/515K
AC-710/713R/715K
CD
BLOCK DIAGRAM

No.3-2 C104852M
A1


REC SIGNAL (EXCEPT DOLBY PRO-LOGIC)
L:REC, H:PB
DOLBY.R/P
X1/X2
R-ch FL1671
L-ch FL1621
BIAS TRAP
TR1756
IC1601 CXA1897Q
(AUDIO SIGNAL PROCESSOR)
TAPE-I
LCH
RCH
(PEAKING) CONT
X1/X2
L-ch:TR1601
R-ch:TR1651
L-ch PB OUT B
L-ch PB OUT A
GND
IREF
Vcc
10K
40K
10dB AMP
MUTE
AGC
NR
DOLBY REC OUT
MIC OFF VREF
L:ON
TR1631
RECEQ CTL
REC EQ
PBEQ CTL
EQ X1/X2 (L:NORMAL SPEED, H:HIGH SPE
REC R-ch
Nor/Cr-2(TAPE-2 EQ SELECT)
Nor/Cr-1(TAPE-1 EQ SELECT) (NO
TAPE.1/2
TAPE-II
LCH
RCH
ERASE
Lch TR1613
Rch TR1663
REC:ON
L-ch TR1611, 1612
R-ch TR1661, 1662
L:OFF
L:ON
TR1743
+9.8V
TR1741
TR1742
Rch
TR1723
TR1722
M.+12V
L:ON
TR1721
OSC PWM
T1731
BIAS OSC
TR1724
TR1725
TR1731
TR1732
H:ON
E1, B1, E3 ONLY
BEAT CANCEL
TC-DK (B) PCB
TAPE-1 PB Rch
TAPE-2 PB Rch
R-ch EQ CONT
R-ch PB OUT A
R-ch PB OUT B
R-ch
AMS
BOP
L-ch FL1611
R-ch FL1661
BIAS TRAP
TR1751
SEARCH
H:ON
NR SW (L:ON, OPEN:OFF)
TR1726
L:ON
BEAT.CAN
+5V
MIC OFF
MIC ON
TR1757
TR1758
Q8
Q7
IC1701
BU4094BCF
(DATA SEPARATOR)
DATA
STB
CLK
OE
BLANK DETECT PULSE
SW3002
OFF ON
DOLBY
(SWITCH LED BLK)
D3039~D3041 D3047
D3053, D3054 D3049~D3050
REW
F (L)
*IC3005
BU4094BCF
REW, STOP
SET, CH (L)
PAUSE
REV, F (L), P-VR
QS'
* IC3005~3007
& IC3200:
DATA SEPARATOR
(INPUT SELECT LED BLK)
+12V
D3018~D3038
TAPE 1
TUNER
*IC3007
BU4094BCF
TAPE1, TAPE2
CD1, CD2, CD3
AUX, TUNER
(SWITCH LED BLK)
D3042, D3045, D3046
D3048, D3051, D3052
CH (R)
FWD
*IC3006
BU4094BCF
REC, BASS
CH-R, FF, F-R
FWD
(TAPE RUNNING INDICATOR)
D3200~
D3211
REV 1
FWD 2
*IC3200
BU4094BCF
REV1, REV2
DECO L1, DECO L2
DECO R1, DECO R2
FWD 1, FWD 2
SYS410 (C) PCB
TR3003~3005
INVERTED BUFFER
STB LED
DATA LED
CLK LED
X3001
8.0MHz
X3002
32.768KHz
X OUT
X IN
XC OUT
XC IN
RESET
VCC
IC3002
PST-9121
RESET IC
+5V-B.UP
E2PR-DAT
E2PR-CLK
REMOCON
KEY1
KEY4
IC3003
XL24C02P
SDA
SCL
(EEP ROM)
REMOCON SIG. DET
PH3001
IC3001
MB38197MA
(SYSTEM CONTROL MI-COM)
OSC PWM
BOP
STB-TCDK
CLK-TCDK
OE
DATA
STEREO
TUNED
PLL OUT
PLL IN
PLL CE
PLL CLK
PULSE 1
PULSE. 2
STB-MEC
R.RESET
R.START
R.DATA
R.CLK
KEY1~4
TS3001~3028
(KEY MATRIX)
(OPERATION SWITCHES)
S7~14
(700 SERIES)
S7~11 (500 SERIES)
SEG7~14 (700 SERIES)
SEG7~11 (500 SERIES)
SEG1~20
SEG 1~5
S1~5
DIG1~16
IN3001
FROM MAIN 510 (A) PCB
VF
VF
FLD
SYS410 (A) PCB




AC-510/513R/515K
AC-710/713R/715K
TUNER/DECK
BLOCK DIAGRAM

No.3-3 C104853M
A1

SYS410(D) PCB
(CD OPERATION)
C1047A503D
W3001
P3001
STB-FLD
CLK-FLD
DATA-FLD
+5V
VF1
VF2
-VP
GND-D
SEG 6
KEY1
KEY2
SYS410(C) PCB
(TAPE LED)
C1047A503C
J3033
W903
J3003
DATA-L1
STB-LED
CLK-LED
DATA-L2
GND-D
+12V-LED
WW3008
W3008
H.P
+12V-DEM
GND-M
PROTECT
KEY3
KEY4
CLK-TCDK
DATA
R-CLK
PULSE1
PULSE2
SYS410(A) PCB
(SYS FLD)
C1047A503A
P3011
VF1
VF2
POW-DOWN
STB-AMP
OE
STB-VR
DATA-SC
STB-PRE
DATA
+5.6V
GND-D
+12V-LED
-VP
CLK-SC
CLK-AMP
PROTECT
MIC-OUT
GND-S
GND-M
+12V-DME
HP
SPANA
LEVEL-S
LEVEL-C
710/713R/715K ONLY
TAPE I
MECHANISM BLOCK
W3010
MOTOR-A.1
MOTOR-B.1
GND-M
MTR+12V.1
PLAY.1
+5V
PULSE.1
PL.1
CrO2.1
PACK.1
PB HEAD
Lch
Rch
W905
SYS410(B) PCB
(MECHA CONTROL)
C1047A503B
WW3007
W3007
DATA-L1
CLK.LED
STB.LED
S5
S4
S3
S2
S1
R-RESET
R-START
R-DATA
STB-MEC
RDS-IN
OE
MIC.ON/OFF
TAPE II
MECHANISM BLOCK
W3009
MOTOR-A.2
MOTOR-B.2
GND-M
MTR+12V.2
PLAY.2
+5V
PULSE.2
PL.2
CrO2.2
PACK.2
AR, FWD
N.C
AR, REV
REC/PB HEAD
ERASE HEAD
P1005
PB (L)
GND
PB (R)
W904
P1004
REC (L)
REC (R)
ERASE
J3022
W902
J1002
STEREO
TUNED
PLL-OUT
PLL-IN
PLL-CE
PLL-CLK
PHOTO-IN
CD-XLAT
CD-CLK
CD-DATA
MODE-SW
CD-SQCK
CD-SQSO
CD-SCOR
CD-SENS
CLK-TCDK
STB-TCDK
OSC-PWM
BOP
RDS-IN
DOLBY-ON
TC-DK(A) PCB
C1047A502A
(TUNER/CD/DECK)
TC-DK(B) PCB
C1047A502B
W1400
WW1400
OPEN SW
GND
CLOSE SW
CLAMP SW
LOAD M+
LOAD M-
TABLE M-
TABLE M+
YMC03(B) PCB
(MOTOR)
C1047A505A
W4410
TC-DK(C) PCB
(RELAY)
P1400
P1401
PHOT DET
PHOT OUT
W941
J1100
VC
Vcc
PD E
PD D
PD A
PD B
PD C
PD F
LD
VR
PD
FCS (+)
TRK (+)
TRK (-)
FCS (-)
W900
PICK-UP
(KSS-213C)
WW4410
W940
W4412
J4410
J4411
YMC03(A) PCB
(SENSOR)
C1047A505A
YMC03(C) PCB
(RELAY)
C1047A505C

PHONES

SPEAKER

Lch

Rch

J201

TM201

710/713R, 715K ONLY

POWER-SUB (B) PCB
C1049A504B

POWER-SUB (A) PCB
C1049A504A

710/713/715 ONLY

CENTER CH

Lch

SURROUND

Rch

J2301

W302

P2302

| | | |
|---|---|---|
| CENTER | 1 | CENTER |
| GND S | 2 | GND S |
| SURRUND | 3 | SURRUND |
| GND S | 4 | GND S |
| S MUTE | 5 | S MUTE |
| O.I DET | 6 | O.I DET |
| VOL DET | 7 | VOL DET |

P2301

P15

W915

W14

P13

W913

MAIN510 (A) PCB
(MAIN)
C1048A501A

J11

| | | |
|---|---|---|
| 24 | VF1 | |
| 23 | VF2 | |
| 22 | POW-DOWN | |
| 21 | STB-AMP | |
| 20 | OE | |
| 19 | STB-VR | |
| 18 | DATA-SC | |
| 17 | STB-PRE | |
| 16 | DATA | |
| 15 | +5.6V | |
| 14 | GND-D | |
| 13 | +12V-LED | |
| 12 | -VP | |
| 11 | CLK-SC | |
| 10 | CLK-AMP | |
| 9 | PROTECT | |
| 8 | MIC-OUT | |
| 7 | GND-S | |
| 6 | GND-M | |
| 5 | +12V-DME | |
| 4 | HP | |
| 3 | SPANA | |
| 2 | LEVEL-S | |
| 1 | LEVEL-C | |

ONLY

P6

| | |
|---|---|
| 1 | +12V-COM |
| 2 | GND-D |
| 3 | GND-M |
| 4 | +5V-IDOL |
| 5 | GND-S |
| 6 | REC-L |
| 7 | REC-R |
| 8 | GND-S |
| 9 | SOURCE-R |
| 10 | SOURCE-L |
| 11 | +12V-PRE |
| 12 | -7V |
| 13 | +7V |
| 14 | SEL-B |
| 15 | SEL-A |
| 16 | I-MUTE-S |

W1006

+12V-COM, GND-D, GND-M, +5V-IDOL, GND-S, REC-L, REC-R, GND-S, SOURCE-R, SOURCE-L, +12V-PRE, -7V, +7V, SEL-B, SEL-A, I-MUTE-S

⚠ TRANS PRIMARY

123V
10V
123V
113V
0V
0V

U

W801
WA SDN L200 6P

| | |
|---|---|
| 6 | WHT |
| 5 | YEW |
| 4 | BRN |
| 3 | BLU |
| 2 | RED |
| 1 | ORG |

ONLY U5 U8 Y6 Y7

SW901
ESE-37311

TRANS PRIMARY ⚠

230V
120V

E

⚠ F2
⚠ F1

⚠ L801
LF-4D-102

P12

C801

DE0807
E102M-KH
250VAC

MAIN510 (B) PCB
C1048A501B

TRANS SECONDARY

P902
RTB-1.5-5P

WA913

W14

R4
0.47 1/2W
R5
0.47 1/2W

P14
B4B-PH WHT4P

T901

MAIN510 (C) PCB C1048A501C

| | VERSION | F1 | F2 | POWER TRANS |
|---|---|---|---|---|
| 510 | E1, E3, B1 | T2.0A | – | 513R:C1048E |
| 513R | S1 | T2.0A | – | 510 :C1048E |
| 515K | U5, U8, Y6, Y7 | T2.0A | T2.0A | 515K:C1048U |
| | | | | |
| 710 | E1, E3, B1 | T2.5A | – | 713R:C1049E |
| 713R | S1 | T2.5A | – | 710 :C1049E |
| 713K | U5, U8, Y6, Y7 | T2.5A | T2.5A | 715K:C1049U |
| | | | | |

K)

W1401

PHOT DET
GND
PHOT OUT
SPINDLE+
SPINDLE-
SLED-
SLED+
GND
SLEDIN SW

) PCB C1047A502C

P1401

| | |
|---|---|
| 1 | OPEN SW |
| 2 | GND |
| 3 | CLOSE SW |
| 4 | GND |
| 5 | CLAMP SW |
| 6 | LOAD M+ |
| 7 | LOAD M- |

W941

P1402

| | |
|---|---|
| 1 | SPINDLE+ |
| 2 | SPINDLE- |
| 3 | SLED- |
| 4 | SLED+ |
| 5 | GND |
| 6 | SLEDIN SW |

W942

CD MECHA. BLOCK
(YMC-03)

J1001

Lch

AUX

Rch

TM1501

FM 75Ω

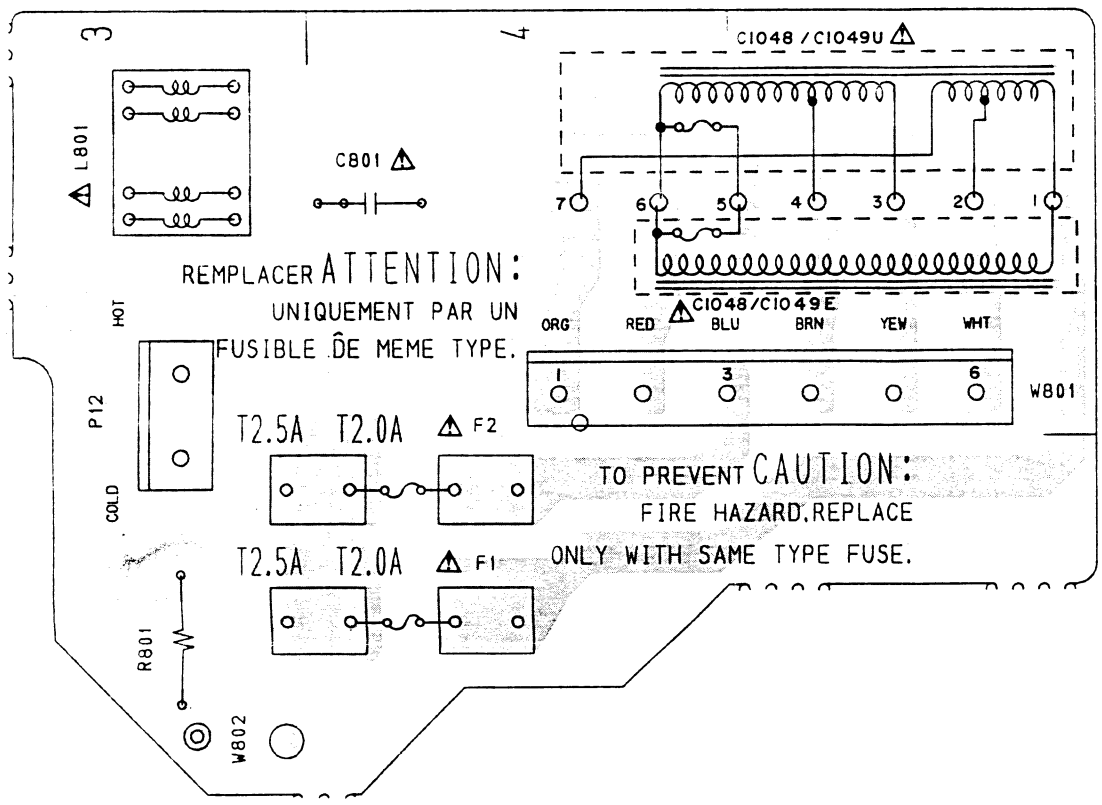
AM LOOP

WARNING: ⚠ AND [illegible] INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET [illegible], ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

# AC-510/513R/515K
# AC-710/713R/715K
# CONNECTION DIAGRAM

No.5-1 C104801M
A1

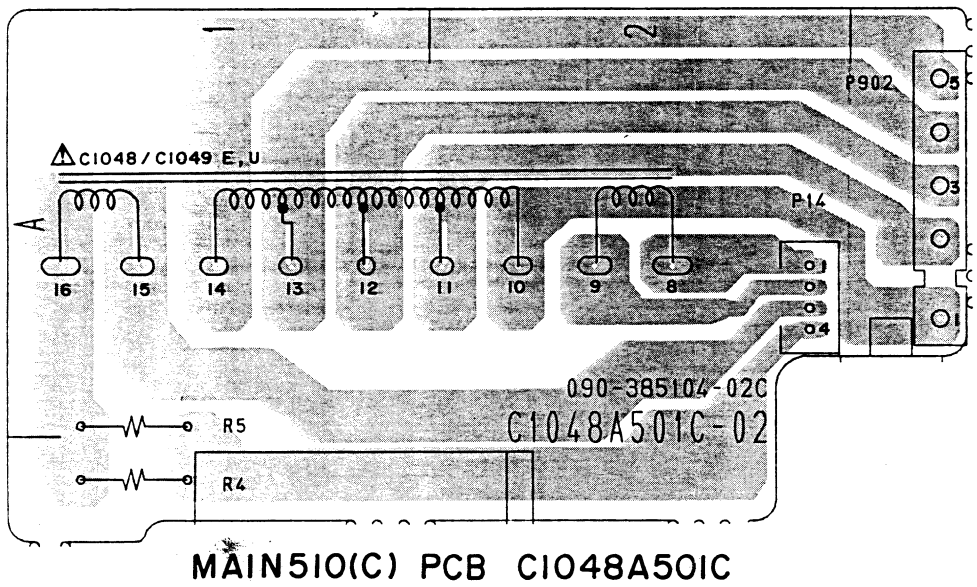



## MAIN510(B) PCB C1048A501B

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

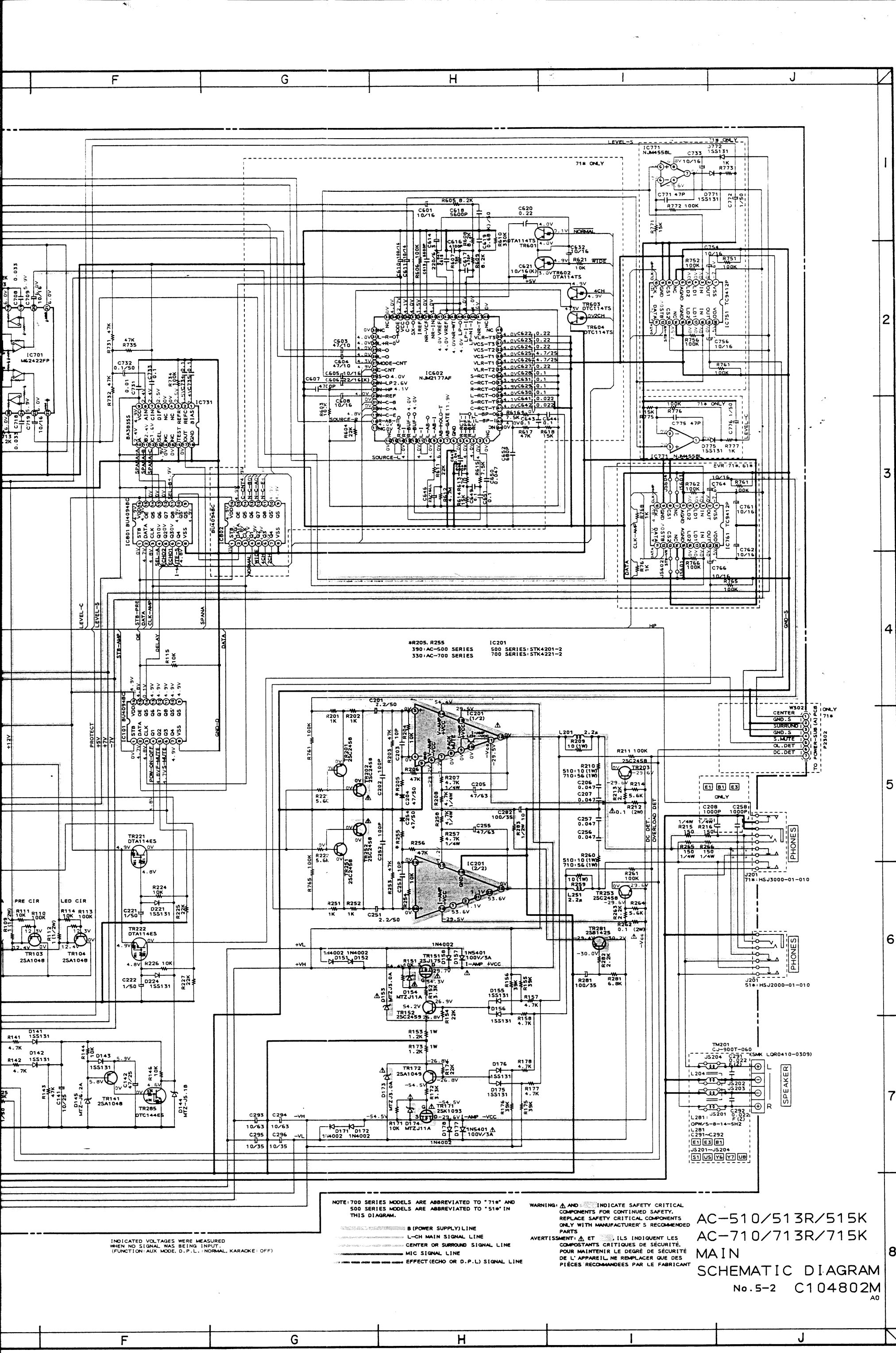
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PART DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.




## MAIN510(C) PCB C1048A501C

TO TC-OK (A) PCB W1006
P6
1-MUTE-S
SEL-A
SEL-B
+7V
-7V
+12V-PRE
SOURCE-L
SOURCE-R
GND-S
REC-L
REC-R
GND-S
+5V-IDOL
GND-M
GND-D
+12V-CDM
JS702 JW(51*)
JS701 JW(51*)
71*. 515K ONLY
(K) ONLY
EXCEPT 515K
TR540 DTA144TS
TR541
TR539 DTC144TS
C556 10/16
TR531 DTA114TS
TR534 DTC114TS
TR532 DTC144TS
TR533 DTC144TS
TR551 DTC114TS
TR552 DTC114TS
TR535 DTC144TS
IC701 M62422FP
JS553 (515K ONLY)
TR537 DTC114TS
TR538 DTC114TS
X501 CSA2.00MG
X551 CRK400-M08
JS501 JW(710, 713R)
JS555
JS552
JW(515K)
EVR 51*
JS406
JS403
IC761 TC9260P
MTZ-J6.2A D751
MTZ-J6.2A D752
MTZ-J6.2A D753
IC581 NJM4558L
IC581 NJM4558L
C582 10/16
+5.6V
TO SYS410A(A) PCB P3011
J11 (51* ONLY)
J11A (71* ONLY)
VF1
VF2
POW-DOWN
STB-AMP
OE
STB-VR
DATA-SC
STB-PRE
DATA
+5.6V
GND-D
+12V-LED
-VP
CLK-SC
CLK-AMP
PROTECT
MIC-OUT
GND-S
GND-M
+12V-OME
SPEANA
HP
SPANA
LEVEL-S
LEVEL-C
R21 1 (1/2W)
TR23 2SB1425
IC21 ML7805FA
D23 1N4002
TR25 2SB621
TR21 2SA1048
TR24 DTC114ES
TR22 DTC114ES
TR26 DTC144ES
TR46 2SD2012
D24 1SS131
D22 1SS131
D25 MTZJ6.2A
D45 MTZJ15B
D46 1SS131
R43 0.47 (1/2W)
TR44 2SB1375
TR45 2SC2458
TR41 2SA1048
TR43 DTC114ES
TR101 2SA1048
TR102 2SA1048
TR103 2SA1048
CD MECHA
DECK MECHA
PRE CIR
LED CI
+12V
POW-DOWN
D63, D66
51* MTZJ6.2A
71* MTZJ7.5C
TO NAIN510(C) PCB P14
TO NAIN510(C) PCB P302
TO POWER-SUB (A) PCB P2301
700 SERIES ONLY
D1 1SS131
D10 1SS133
D4 MTZ-J5.1B
D5 MTZ-J5.1B
D81 1N4002
TR81 2SB1375
TR82 2SA1048
PROTECT DET.
TR121 DTC114TS
TR122 DTC114TS
TR123 DTC114TS
TR124 DTC114TS
RL1, RL2 OSA-SS-212DM5
*D2, D3
51* DBF40C 200V/4A
71* DBF60C 200V/6A
RB3
51* 5.6K
71* 10K
MAIN510 (A) PCB C1048A501A




INDICATED VOLTAGES WERE MEASURED WHEN NO SIGNAL WAS BEING INPUT. (FUNCTION : AUX MODE, D.P.L. : NORMAL, KARAOKE : OFF)

NOTE : 700 SERIES MODELS ARE ABBREVIATED TO "71*" AND 500 SERIES MODELS ARE ABBREVIATED TO "51*" IN THIS DIAGRAM.

B (POWER SUPPLY) LINE
L-CH MAIN SIGNAL LINE
CENTER OR SURROUND SIGNAL LINE
MIC SIGNAL LINE
EFFECT (ECHO OR D.P.L) SIGNAL LINE

WARNING: ⚠ AND ▒ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▒ ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

# AC-510/513R/515K
# AC-710/713R/715K
# MAIN
# SCHEMATIC DIAGRAM

No.5-2 C104802M
A0

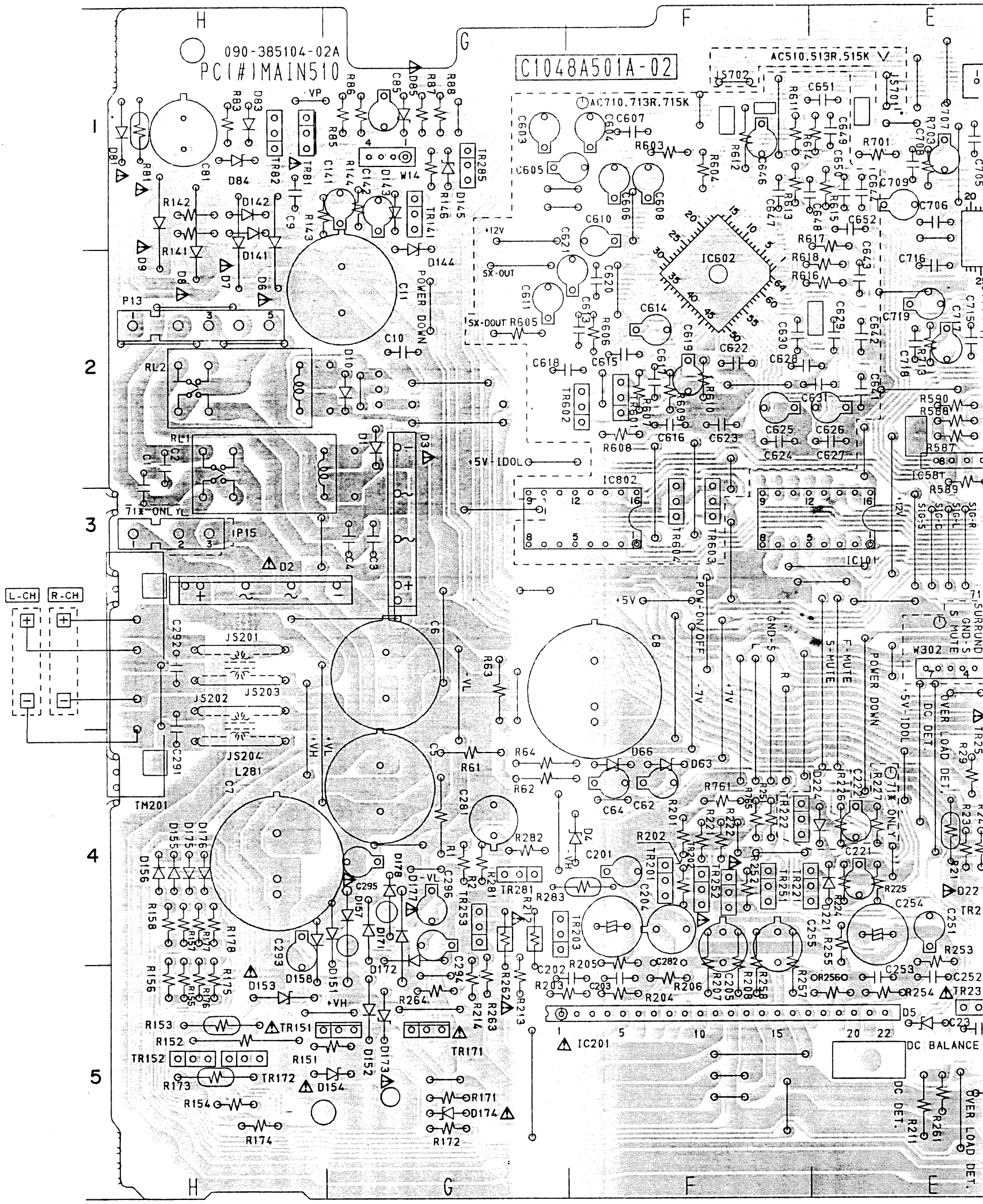
## PRINCIPAL PARTS LOCATION

**ICs**

| | |
|---|---|
| IC21 | E5 |
| IC101 | E,F3 |
| IC201 | F5 |
| IC501 | C1 |
| IC581 | E2 |
| IC602 | F2 |
| IC701 | E1,2 |
| IC731 | C2 |
| IC751 | D3,4 |
| IC761 | C3,4 |
| IC771 | C,D3 |
| IC801 | D2 |
| IC802 | F,G3 |

**TRANSISTORs**

| | |
|---|---|
| TR21 | D4 |
| TR22 | E4 |
| TR23 | E5 |
| TR24 | D5 |
| TR25 | E4 |
| TR26 | E4 |
| TR41 | D4 |
| TR43 | D4 |
| TR44 | D5 |
| TR45 | D5 |
| TR46 | D5 |
| TR81 | H1 |
| TR82 | H1 |
| TR101 | C4 |
| TR102 | C4 |
| TR103 | C4 |
| TR104 | C,D4 |
| TR121 | C5 |
| TR122 | C5 |
| TR123 | C5 |
| TR124 | C5 |
| TR141 | G1 |
| TR151 | G,H5 |
| TR152 | H5 |
| TR171 | G5 |
| TR172 | H5 |
| TR201 | F4 |
| TR202 | F4 |
| TR203 | G4 |
| TR221 | E,F4 |
| TR222 | F4 |
| TR251 | F4 |
| TR252 | F4 |
| TR253 | G4 |
| TR281 | G4 |
| TR285 | G1 |
| TR531 | C1 |
| TR532 | D1 |
| TR533 | D1 |
| TR534 | C2 |
| TR535 | D1,2 |
| TR536 | C2 |
| TR537 | B1 |
| TR538 | C1 |
| TR539 | B1 |
| TR540 | B1 |
| TR541 | B1 |
| TR551 | C2 |
| TR552 | C1,2 |
| TR601 | F2 |
| TR602 | F2 |
| TR603 | F3 |

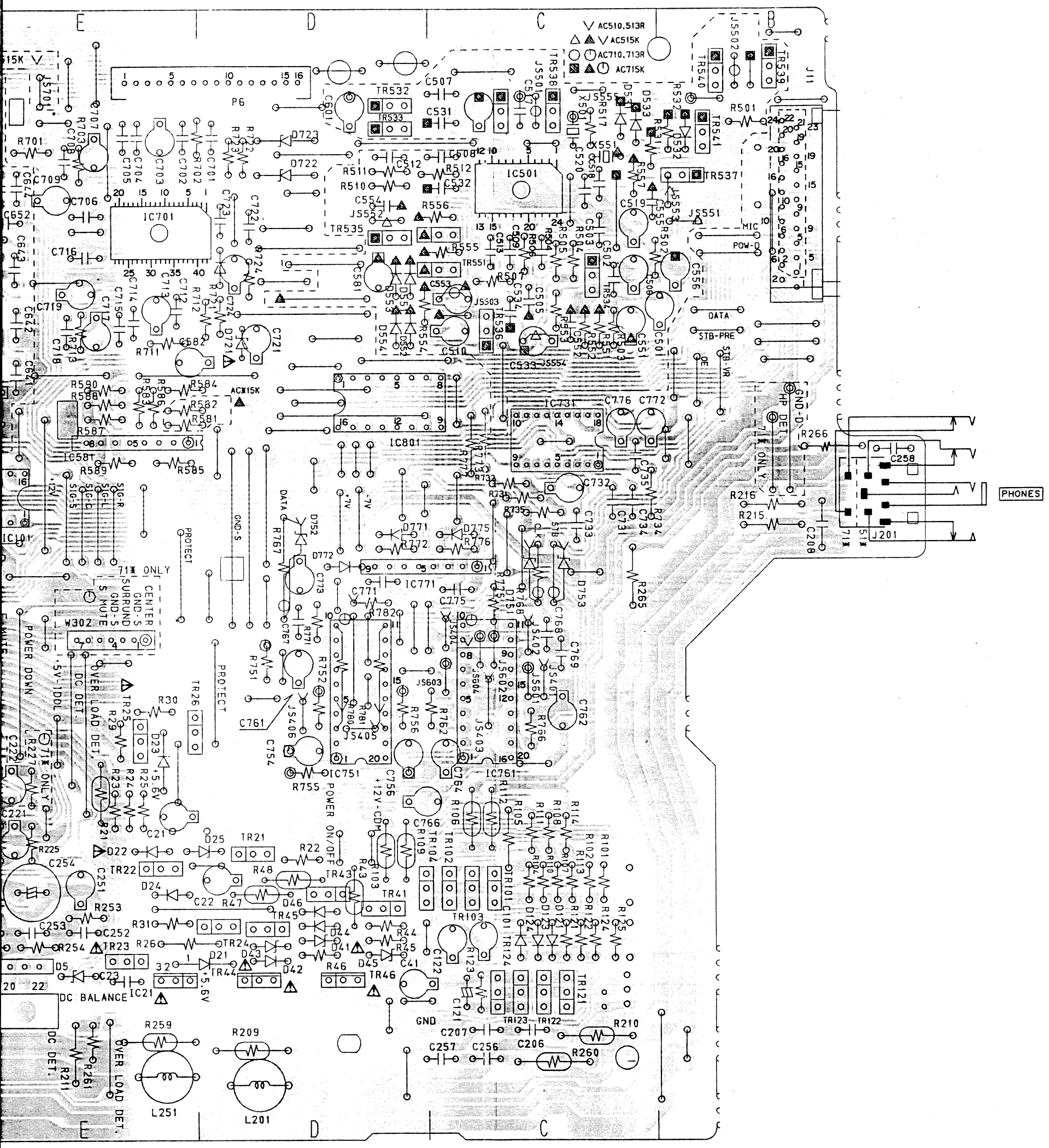



MAIN510(A) PC

R534 ..... C2
R535 ..... D1,2
R536 ..... C2
R537 ..... B1
R538 ..... C1
R539 ..... B1
R540 ..... B1
R541 ..... B1
R551 ..... C2
R552 ..... C1,2
R601 ..... F2
R602 ..... F2
R603 ..... F3
TR604 ..... F3

**CONNECTORs**

J11 ..... B1
J201 ..... A,B3
P6 ..... D,E1
P13 ..... H2
P15 ..... H3
W14 ..... G1
W302 ..... E3



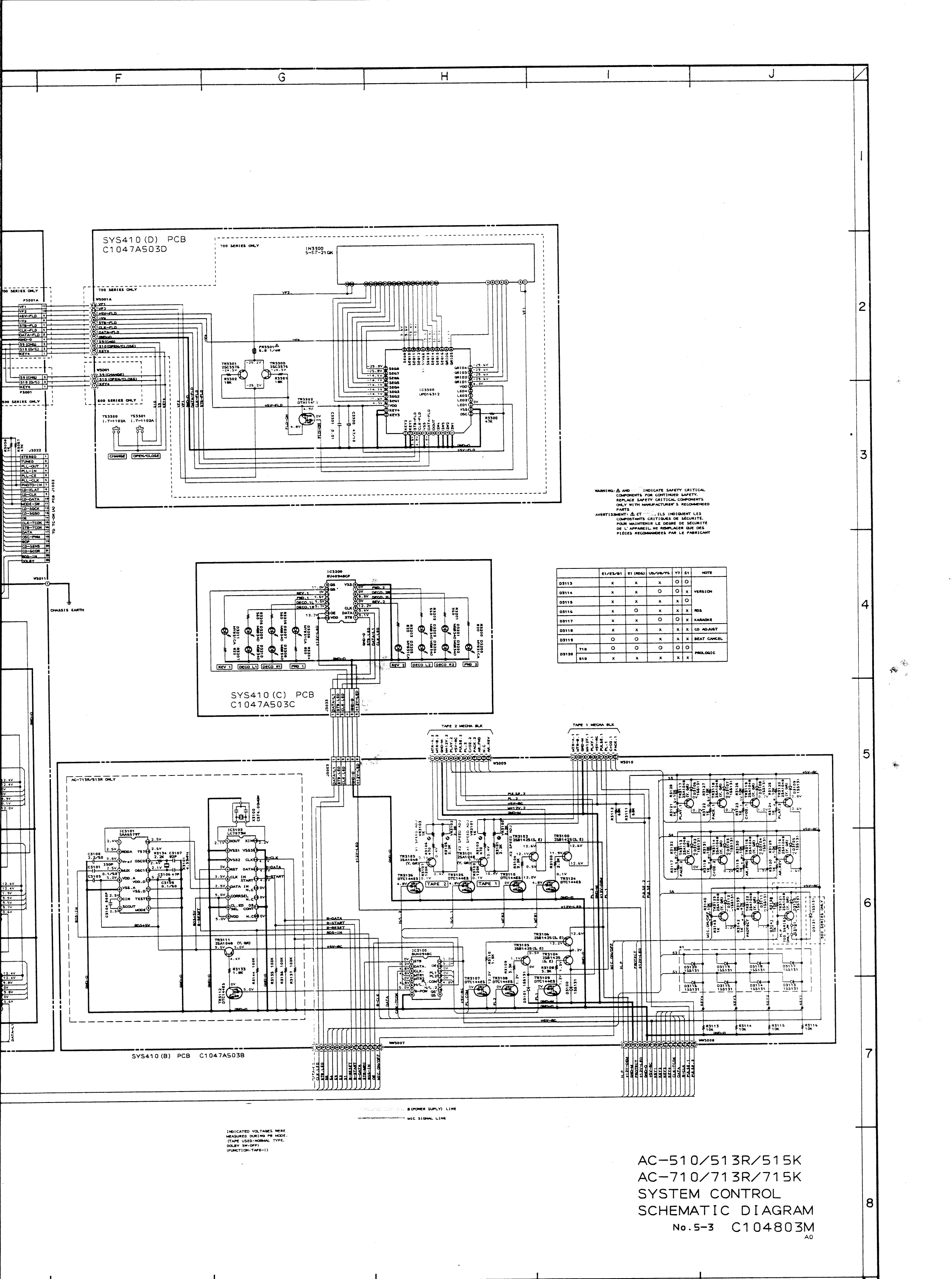

AIN510(A) PCB C1048A501A

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PART DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

A
B
C
D
E
1
2
3
4
5
6
7
8
10
IC3001
M38197MA-149FP TX2-SYS75-1
IC3003
XL24C02P
IC3004 TA2011S
IC3005
BU4094BCF
IC3006
BU4094BCF
IC3007
BU4094BCF
700 SERIES ONLY
500 SERIES ONLY
SW3001
ROTARY ENCODER
EC16B24304
SW3002
VPS-800
VR3001
RK11K1140 B2K
MIC
VOLUME
CHASSIS
SYS410(A) PCB C1047A503A




| | | E1/E3/B1 | E1 (RD6) | US/UB/Y6 | Y7 | S1 | NOTE |
|---|---|---|---|---|---|---|---|
| D3113 | | x | x | x | O | O | VERSION |
| D3114 | | x | x | O | O | x | |
| D3115 | | x | x | x | x | O | |
| D3116 | | x | O | x | x | x | RDS |
| D3117 | | x | x | O | O | x | KARAOKE |
| D3118 | | x | x | x | x | x | CD ADJUST |
| D3119 | | O | O | x | x | x | BEAT CANCEL |
| D3120 | 710 | O | O | O | O | O | PROLOGIC |
| | 510 | x | x | x | x | x | |

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

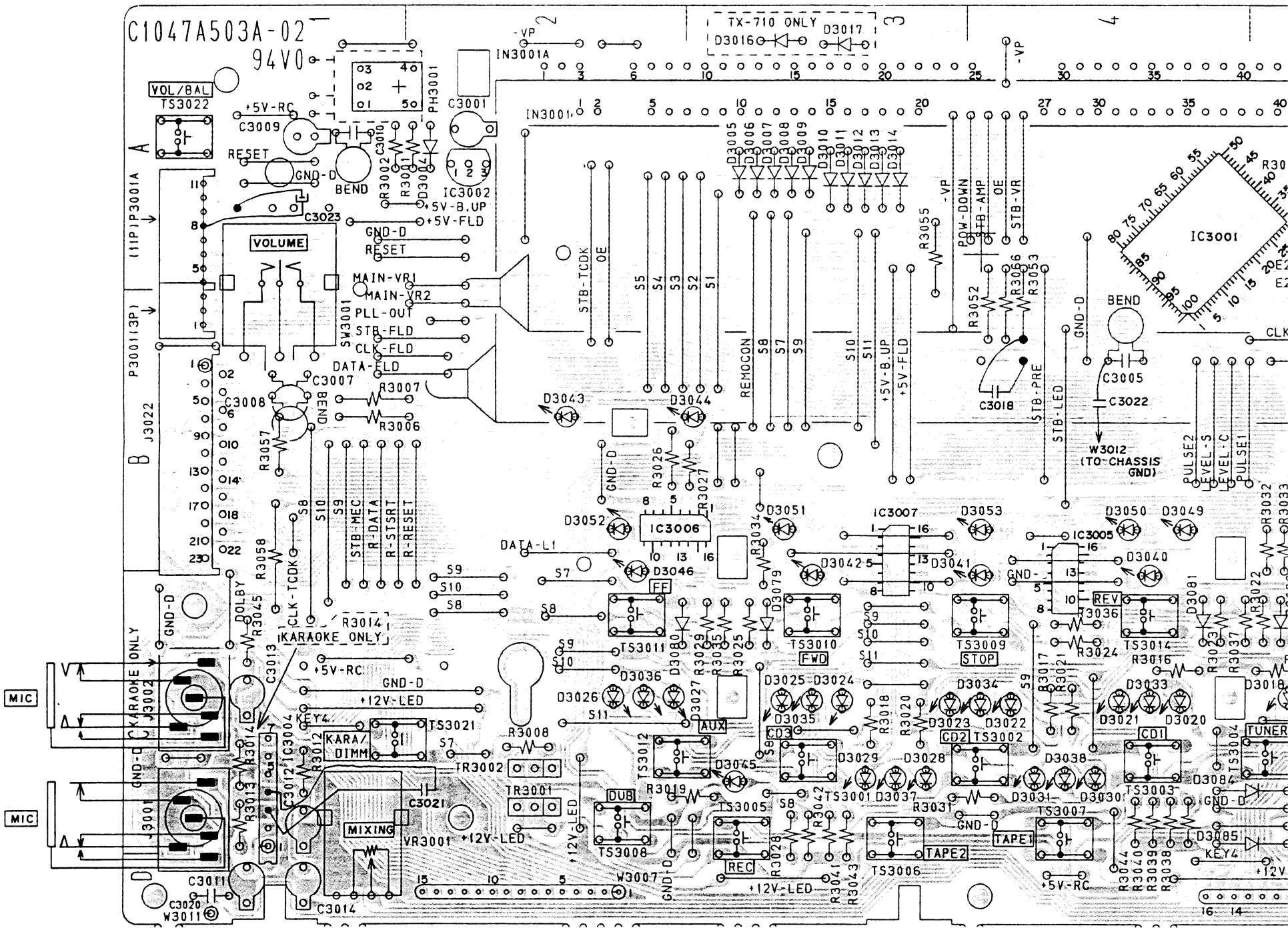
INDICATED VOLTAGES WERE MEASURED DURING PB MODE. (TAPE USED: NORMAL TYPE, DOLBY SW: OFF) (FUNCTION: TAPE-1)

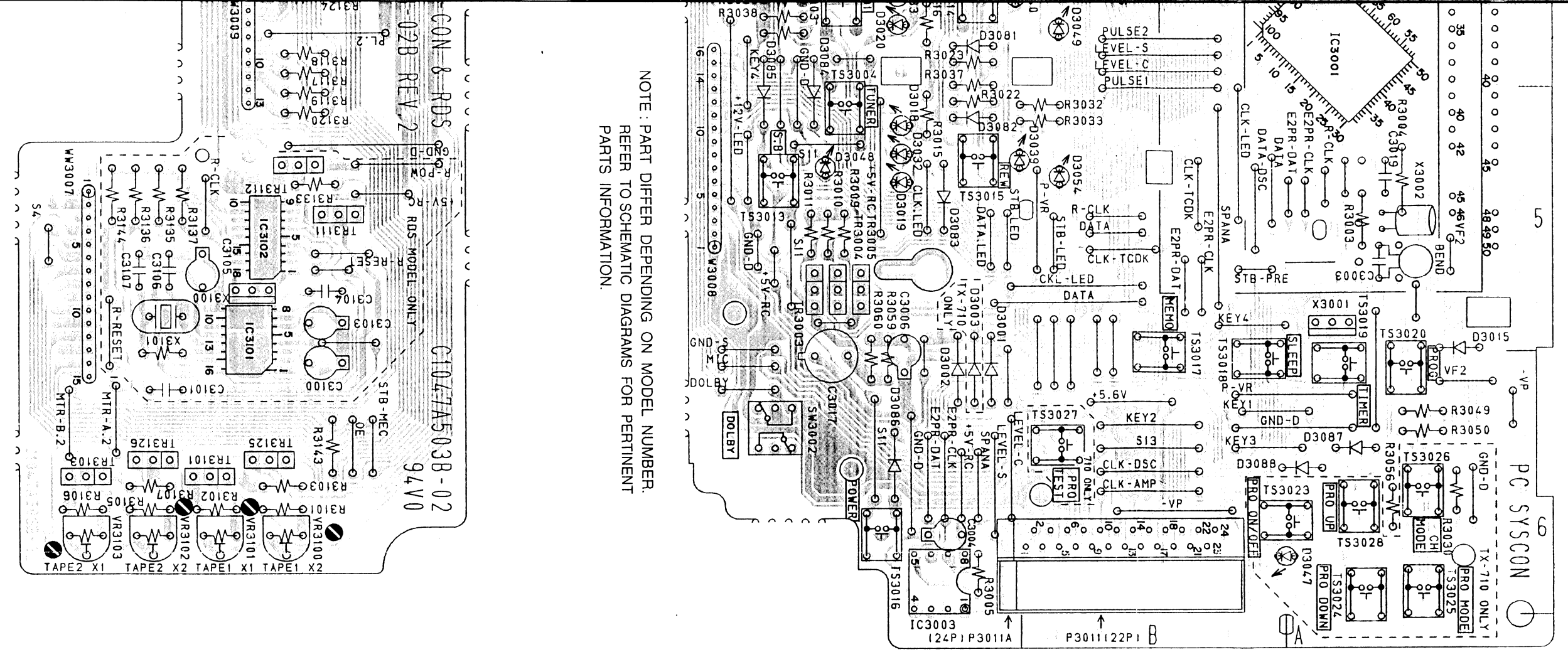
# AC-510/513R/515K
# AC-710/713R/715K
# SYSTEM CONTROL
# SCHEMATIC DIAGRAM

No.5-3 C104803M

A0

C1047A503A-02
94V0

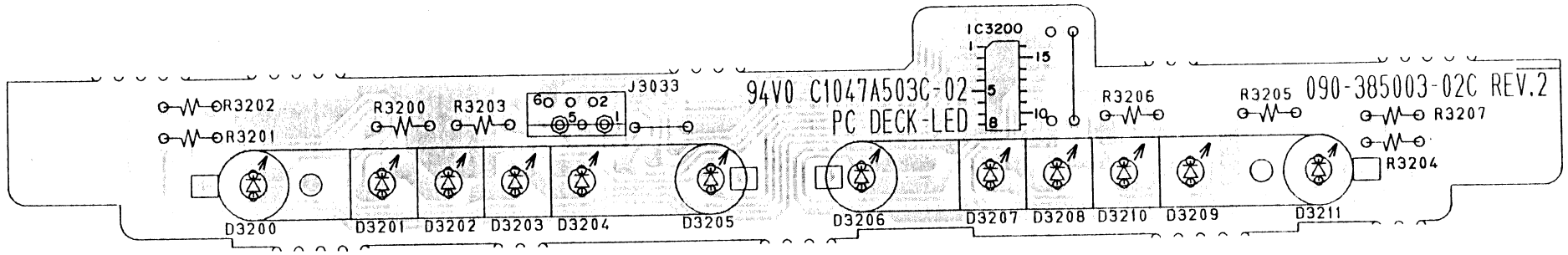

VOL/BAL
TS3022
+5V-RC
C3009
RESET
GND-D
BEND
PH3001
C3001
IC3002
+5V-B.UP
+5V-FLD
C3023
VOLUME
SW3001
MAIN-VR1
MAIN-VR2
PLL-OUT
STB-FLD
CLK-FLD
DATA-FLD
P3001(3P)
J3022
C3007
C3008
R3007
R3006
R3057
R3058
S8
S10
S9
STB-MEC
R-DATA
R-STSRT
R-RESET
CLK-TCDK
DOLBY
R3045
R3014
KARAOKE ONLY
C3013
J3002
MIC
J3001
C3012
C3004
KEY4
KARA/DIMM
TS3021
TR3002
TR3001
C3021
MIXING
VR3001
+12V-LED
C3011
C3020
W3011
C3014
W3007
R3008
DUB
TS3008
TS3012
R3019
D3045
TS3005
REC
R3028
R3042
R3041
R3043
TS3006
TAPE2
TAPE1
TS3007
R3031
D3043
D3044
D3051
D3052
IC3006
R3026
R3027
R3034
D3046
FF
TS3011
D3036
D3026
AUX
S11
DATA-L1
S7
S9
S10
S8
D3080
D3079
R3029
R3035
R3025
FWD
TS3010
STOP
TS3009
D3025
D3024
D3035
CD3
D3029
D3028
D3038
D3037
D3034
D3023
D3022
CD2
TS3002
CD1
TS3003
D3033
D3021
D3020
TUNER
TS3004
D3084
D3085
D3030
D3031
R3018
R3020
R3017
R3021
R3024
R3016
R3036
REV
TS3014
D3040
D3041
D3042
D3053
IC3007
D3050
D3049
IC3005
D3081
R3022
R3037
R3023
R3032
R3033
D3018
R3055
POW-DOWN
STB-AMP
OE
STB-VR
R3052
R3066
R3053
C3018
STB-PRE
STB-LED
C3005
C3022
W3012
(TO-CHASSIS GND)
PULSE2
LEVEL-S
LEVEL-C
PULSE1
IC3001
R30
CLK
BEND
GND-D
-VP
IN3001A
IN3001
D3005
D3006
D3007
D3008
D3009
D3010
D3011
D3012
D3013
D3014
STB-TCDK
OE
S5
S4
S3
S2
S1
REMOCON
S6
S7
S9
S10
S11
+5V-B.UP
+5V-FLD
TX-710 ONLY
D3016
D3017
C3010
R3002
R3001
D3004
C3002
C3003
R3003
R3004
D3001
D3002
D3003
R3010
R3011
R3012
R3013
R3015
C3015
C3016
C3017
R3000
R3050
R3051
R3054
R3056
R3060
R3061
R3062
R3063
R3064
R3065
R3067
R3068
R3069
R3070
R3071
R3072
R3073
R3074
R3075
R3076
R3077
R3078
R3079
R3080
R3081
R3082
R3083
R3084
R3085
R3086
R3087
R3088
R3089
R3090
R3091
R3092
R3093
R3094
R3095
R3096
R3097
R3098
R3099
R3100
R3101
R3102
R3103
R3104
R3105
R3106



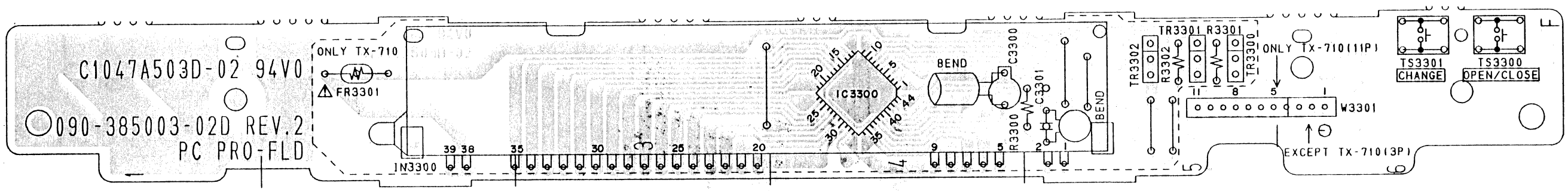

NOTE : PART DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

**C1047A503B**

NOTE : PART DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.




SYS410(C) PCB C1047A503C




SYS410(D) PCB C1047A503D

NOTE : PART DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

IC1601
CXA1897Q
IC1200
CXD2508AQ
IC1701
BU4094BCF
IC1702
BU4094BCF
IC1400 BA6247
TC-DK (B) PCB
C1047A502B
TO MAIN510 (A) PCB P6
TO SYS410 (A) PCB J3022
REC EQ CONTROL
PB EQ CONTROL
REC EQ
NR
AGC
AMS
MUTE
IREF
REC.MUTE-TAPE
REC.MUTE-MIC
REC.M-TAPE
REC.M-MIC
TAPE.L
REC-IN.L
TAPE.R
REC-IN.R
REC.IN.L M(C)
REC.IN.R M(C)
P1005
P1004
W1006
J1002
YMC-03 (B) PCB
C1047A505B
(MOTOR)
YMC-03 (A) PCB
C1047A506A
(SENSOR)
YMC-03 (A) PCB
C1047A501B
(RELAY)

| FUNCTION | SEL.A | SEL.B |
|---|---|---|
| TAPE | L | L |
| AUX | L | H |
| TUNER | H | L |
| CD | H | H |

| | (Y6), (Y7) (US) (S), (U8) | (E), (B) |
|---|---|---|
| C1507 | × | ○ |
| JS1506 | ○ | × |

| | (Y6), (Y7) (US) (S), (U8) | (E), (B) |
|---|---|---|
| L1501 | ○ | × |
| JS1501 | × | ○ |

| | TUNER PACK |
|---|---|
| (E), (B) | TFCB5E720A |
| (S), (US), (U8), (Y6) | TFCB1U717A |
| (Y7) | TFCB1S713A |

| IC1400 CONTROL | | | | | | | |
|---|---|---|---|---|---|---|---|
| IN | | | OUT | | | |
| 4 | 5 | 6 | 10 | 2 | 3 | |
| L | L | H | L | L | L | STOP |
| H | L | L | H | L | OPEN | LOADING |
| H | L | H | L | H | OPEN | |
| L | H | L | H | OPEN | L | TABLE |
| L | H | H | L | OPEN | H | |
| H | H | H | L | L | L | STOP |

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN uF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN uF/WV

INDICATED VOLTAGES WERE MEASURED DURING CD PLAY MODE.

B (POWER SUPPLY) LINE
PB SIGNAL LINE
REC SIGNAL LINE
TUNER & AUX SIGNAL LINE
CD SIGNAL LINE
L-CH SIGNAL LINE
RF SIGNAL LINE
FOCUS SERVO LINE
TRACKING SERVO LINE
SPINDLE MOTOR LINE
SLED MOTOR LINE

TC-DK (A) PCB C1047A502A

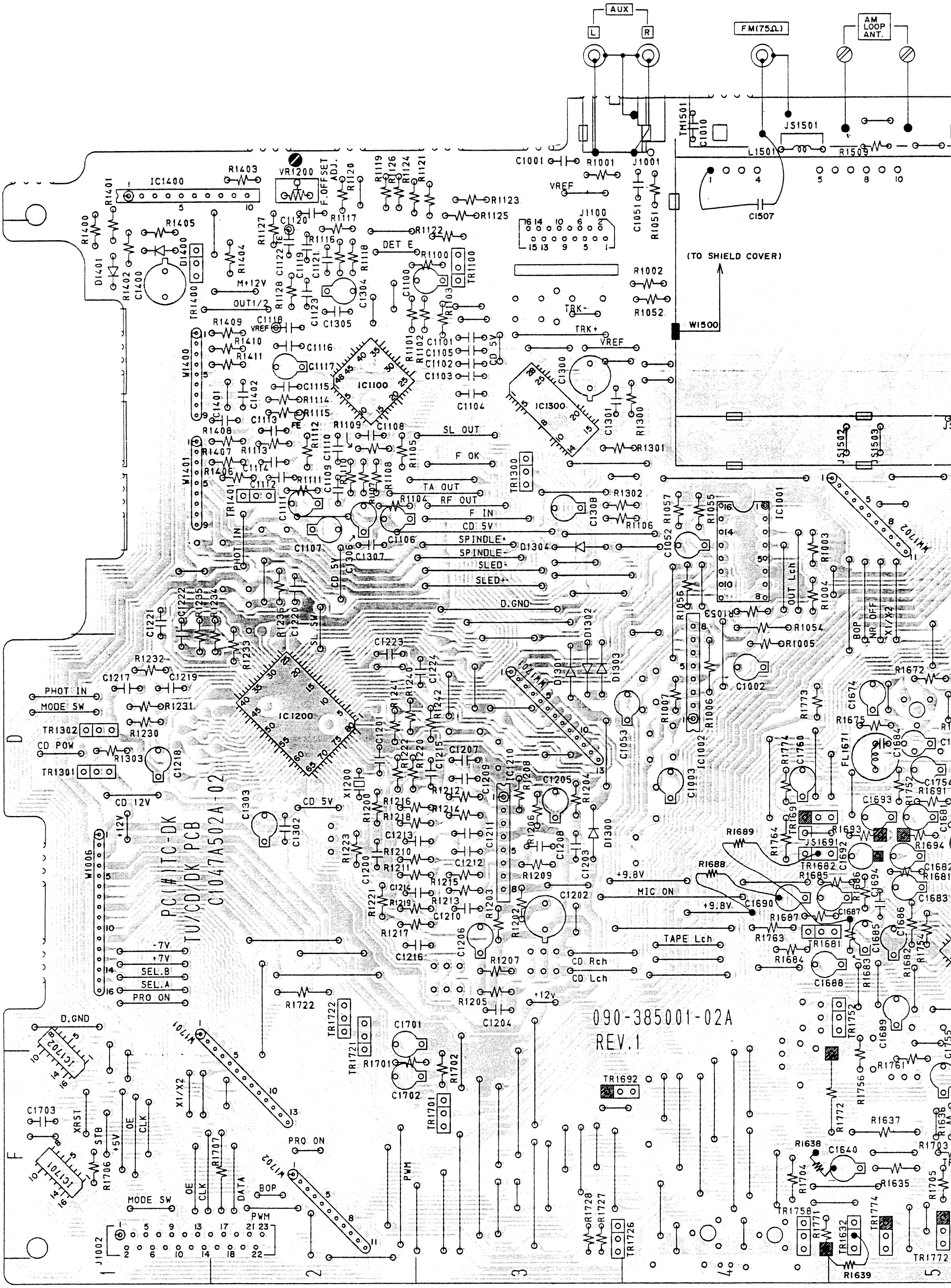
TC-DK (C) PCB C1047A502C

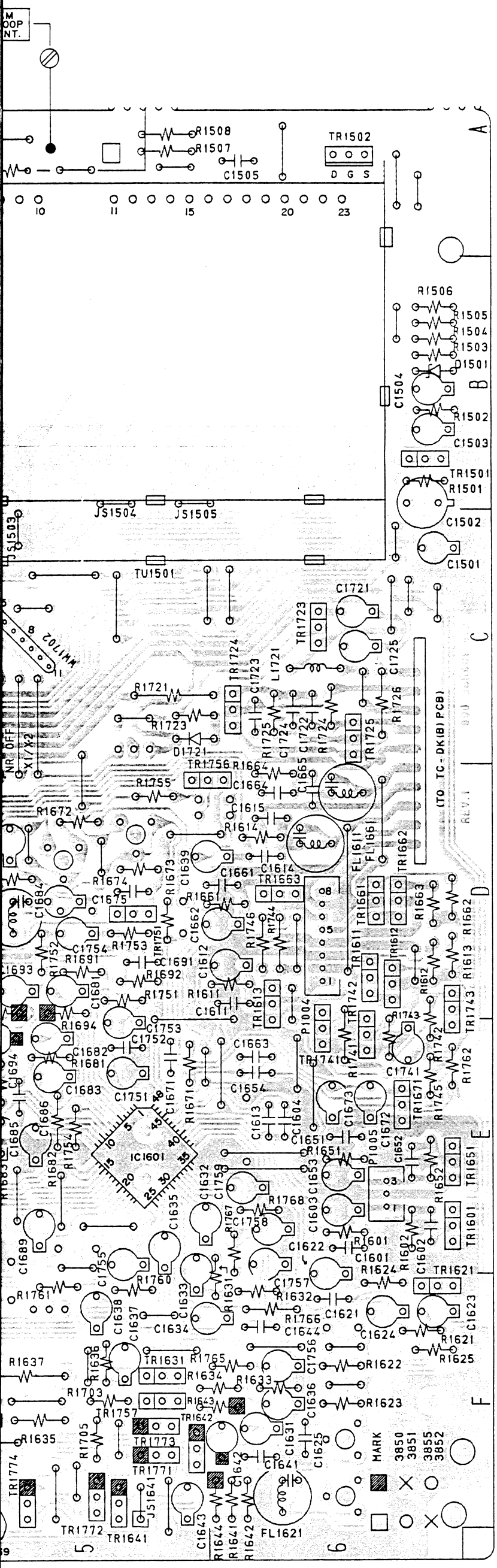
C1047A505C YMC-03 (C) PCB (RELAY)

CD-MECHA YMC-03

# AC-510/513R/515K
# AC-710/713R/715K
# DECK/CD/TUNER
# SCHEMATIC DIAGRAM

No.5-4 C104804M
A0


AUX
L
R
FM(75Ω)
AM LOOP ANT.
TM1501
C1010
JS1501
L1501
R1509
C1507
C1001
R1001
J1001
VREF
C1051
R1051
J1100
(TO SHIELD COVER)
R1002
R1052
WI500
TRK-
TRK+
VREF
IC1400
R1403
VR1200
F.OFFSET ADJ.
R1120
R1119
R1126
R1124
R1121
R1123
R1125
R1122
R1127
C1120
R1117
R1116
C1122
C1119
C1121
R1118
C1304
C1305
DET E
R1100
TR1100
C1100
R1103
R1405
R1400
R1401
D1401
R1402
C1400
D1400
R1404
M+12V
OUT1/2
TR1400
R1128
C1123
R1409
C1116
VREF
R1410
R1411
C1116
C1117
C1115
R1114
R1115
C1113
FE
R1408
R1407
R1113
R1406
C1114
C1112
W1401
W1400
TR1401
PHOT IN
C1111
R1112
C1109
C1110
R1110
R1109
C1108
R1108
R1107
R1111
R1105
SL OUT
F OK
TA OUT
RF OUT
F IN
CD 5V
SPINDLE+
SPINDLE-
SLED+
SLED-
D.GND
C1106
C1107
C1306
C1307
IC1100
C1101
C1105
C1102
C1103
C1104
R1101
R1102
CD 5V
C1300
IC1300
C1301
R1300
R1301
TR1300
C1308
R1302
R1106
C1052
R1057
R1055
IC1001
R1003
R1004
R1056
R1053
R1054
R1005
OUT Lch
BOP
NR OFF
X1/X2
W1002
C1002
C1053
D1304
D1302
D1303
D1301
C1003
IC1002
R1007
R1006
C1222
C1221
R1235
R1234
R1236
C1220
SL SW
C1223
C1224
R1241
R1240
R1242
C1201
R1222
R1220
C1215
C1207
C1210
R1208
C1205
R1204
R1212
C1209
C1211
R1206
C1208
C1203
D1300
R1209
C1202
R1207
C1206
R1205
C1204
+12v
+9.8V
MIC ON
+9.8V
TAPE Lch
CD Rch
CD Lch
R1672
C1674
R1773
R1675
FL1671
C1684
C1760
R1774
R1752
C1754
R1691
C1693
R1764
TR1691
R1693
JS1691
R1689
R1694
TR1682
C1692
R1688
R1685
R1686
C1694
C1682
R1681
C1683
C1690
C1687
R1687
R1763
TR1681
R1684
C1688
C1686
C1685
R1682
R1683
TR1752
C1689
R1761
R1756
R1772
R1637
R1638
C1640
R1704
R1635
R1703
R1705
TR1758
R1771
TR1632
TR1774
R1639
TR1772
TR1692
R1728
R1727
TR1726
R1722
TR1722
TR1721
C1701
R1701
C1702
R1702
TR1701
PWM
DATA
BOP
MODE SW
PRO ON
XRST
STB
+5V
OE
CLK
R1706
R1707
C1703
IC1701
IC1702
X1/X2
-7V
+7V
SEL.B
SEL.A
PRO ON
+12V
PHOT IN
MODE SW
CD POW
TR1302
TR1301
R1232
C1217
C1219
R1231
R1230
R1303
C1218
CD 12V
CD 5V
X1200
C1303
C1302
R1223
C1200
R1200
R1216
R1218
C1213
R1210
R1211
C1212
R1215
C1214
R1219
R1213
C1210
R1217
C1216
PC(#1TC-DK
TU/CD/DK PCB
C1047A502A-02
090-385001-02A
REV.1
TC-DK(A) PCB C1047A502A
NOTE : PART DIF
REFER TO
PARTS IN




## PRINCIPAL PARTS LOCATION

**ICs**

| | |
|---|---|
| IC1001 | C4 |
| IC1002 | C,D4 |
| IC1100 | B2 |
| IC1200 | D2 |
| IC1210 | D,E3 |
| IC1300 | B,C3 |
| IC1400 | A1,2 |
| IC1601 | E5 |
| IC1701 | F1 |
| IC1702 | F1 |

**TRANSISTORs**

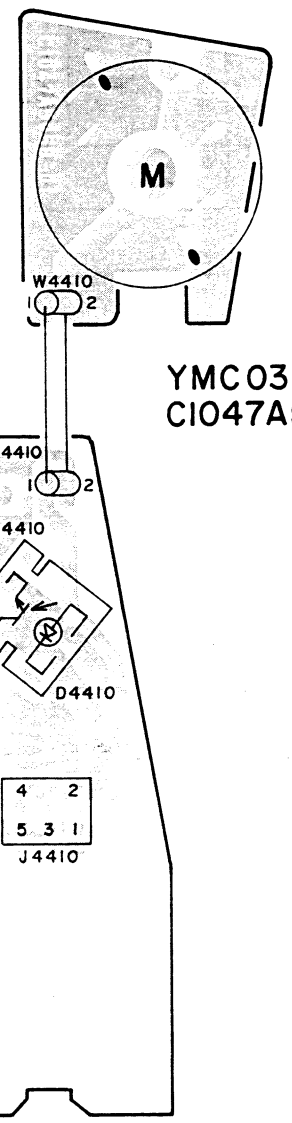
| | |
|---|---|
| TR1100 | B3 |
| TR1300 | C3 |
| TR1301 | D1 |
| TR1302 | D1 |
| TR1400 | B1 |
| TR1401 | C2 |
| TR1501 | B6 |
| TR1502 | A6 |
| TR1601 | E6 |
| TR1611 | D6 |
| TR1612 | D6 |
| TR1613 | D6 |
| TR1621 | F6 |
| TR1631 | F5 |
| TR1632 | F5 |
| TR1641 | F5 |
| TR1651 | E6 |
| TR1661 | D6 |
| TR1662 | D6 |
| TR1663 | D6 |
| TR1671 | E6 |
| TR1681 | E4 |
| TR1682 | E4 |
| TR1691 | D4 |
| TR1692 | F3,4 |
| TR1701 | F3 |
| TR1721 | E,F2 |
| TR1722 | E2 |
| TR1723 | C6 |
| TR1724 | C6 |
| TR1725 | C6 |
| TR1726 | F3 |
| TR1741 | D6 |
| TR1742 | D6 |
| TR1743 | D6 |
| TR1751 | D5 |
| TR1752 | E5 |
| TR1756 | D5,6 |
| TR1757 | F5 |
| TR1758 | F4 |
| TR1771 | F5 |
| TR1772 | F5 |
| TR1773 | F5 |
| TR1774 | F5 |

**CONNECTORs**

| | |
|---|---|
| J1002 | F1,2 |
| J1100 | B3 |
| P1004 | D6 |
| P1005 | E6 |

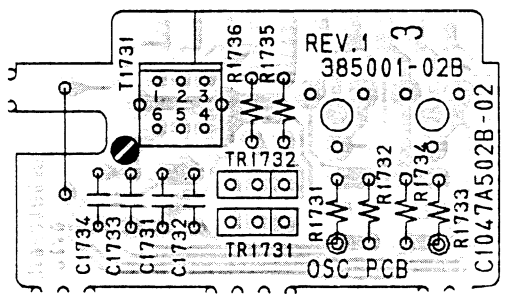
**WIREs**

| | |
|---|---|
| W1006 | E1 |
| W1400 | B1 |
| W1401 | C1 |

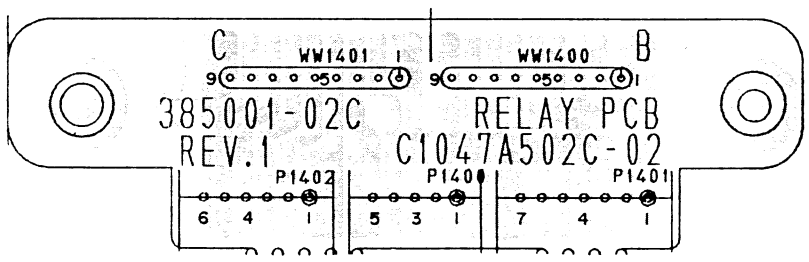



YMC03(B) PCB
C1047A505B

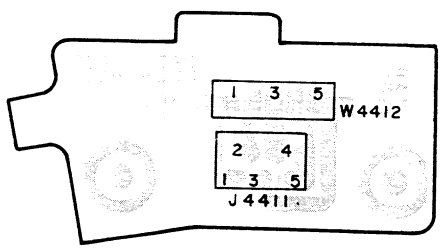
YMC03(A) PCB
C1047A505A




TC-DK(B) PCB C1047A502B




TC-DK(C) PCB C1047A502C




YMC03(C) PCB
C1047A505C

NOTE : PART DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.

WARNING: ⚠ AND ▒▒ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER' S RECOMMENDED PARTS

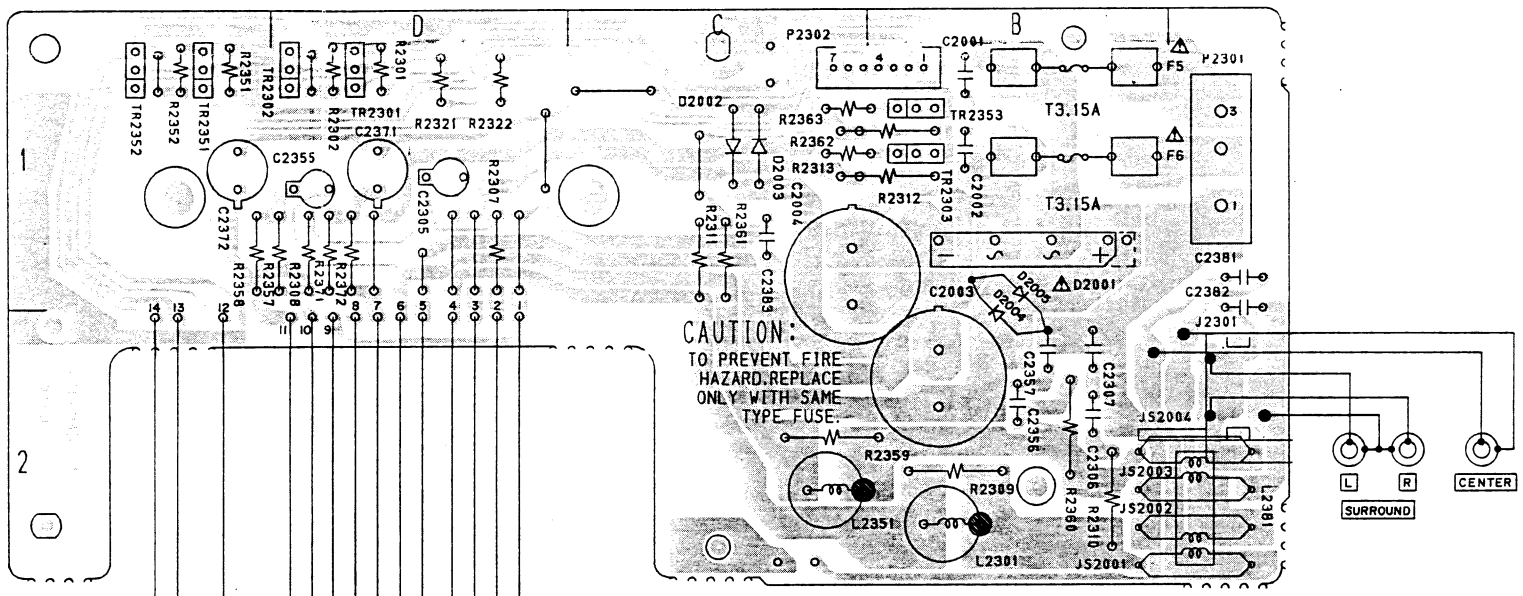
AVERTISSMENT: ⚠ ET ▒▒, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W
ALL CAPACITORS IN μF 50WV

INDICATED VOLTAGES WERE MEASURED WHEN NO SIGNAL WAS BEING INPUT.

▒▒▒▒▒▒▒▒ +B (POWER SUPPLY) LINE
— — — — CENTER CH SIGNAL LINE
- - - - - - SURROUND CH SIGNAL LINE

AC-710/713R/715K
POWER-SUB
SCHEMATIC DIAGRA
No.5-5 C10480




POWER-SUB(A) PCB C1049A504A

POWER-SUB(B) PCB C1049A504B

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

3 ONLY
C2381
0.01
CENTER CH
SURROUND L
SURROUND R
C2382
0.01
J2301

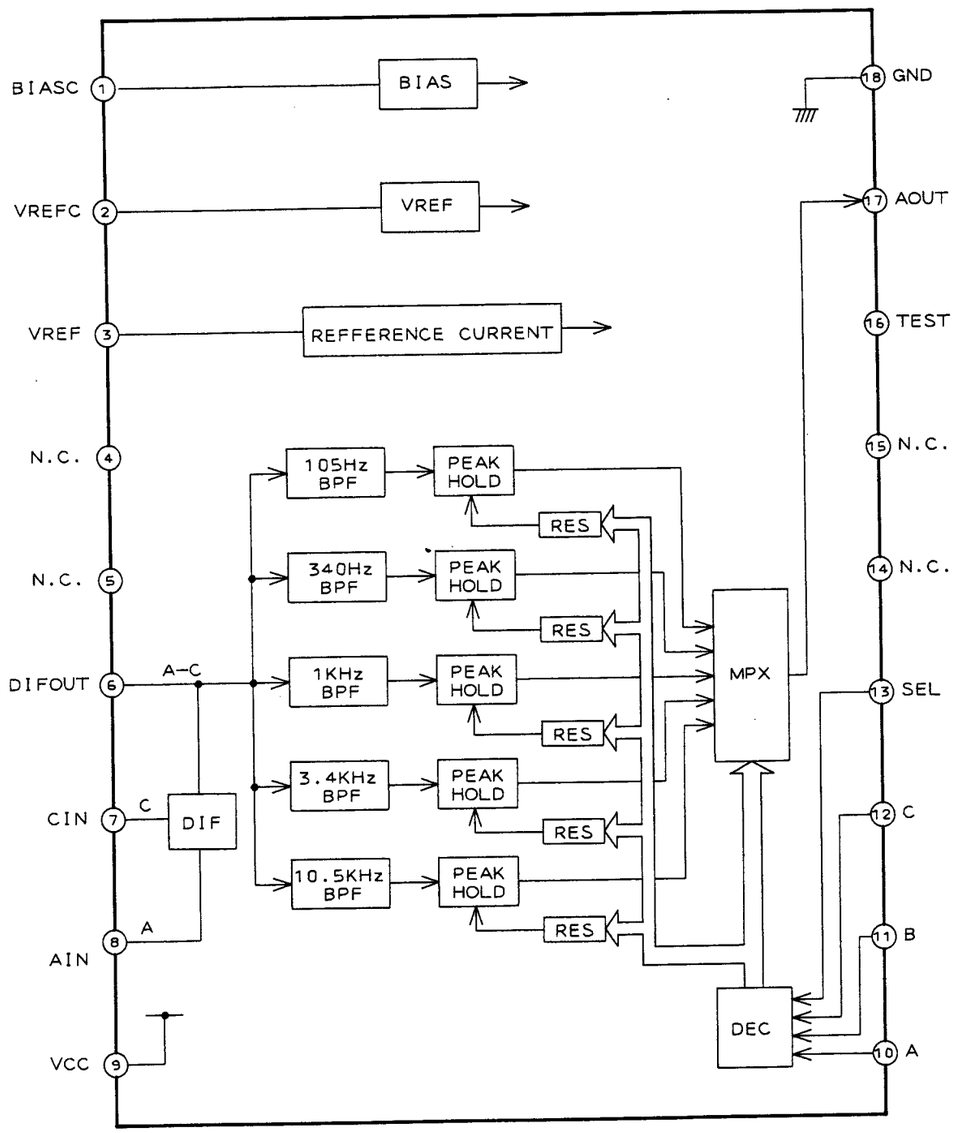
CENTER CH
SURROUND L
SURROUND R
J2301

8, Y6, Y7 ONLY

R/715K

DIAGRAM
104805M
A3

## BA3835S (5 BAND BPF FOR SPECTRUN ANALYZER)



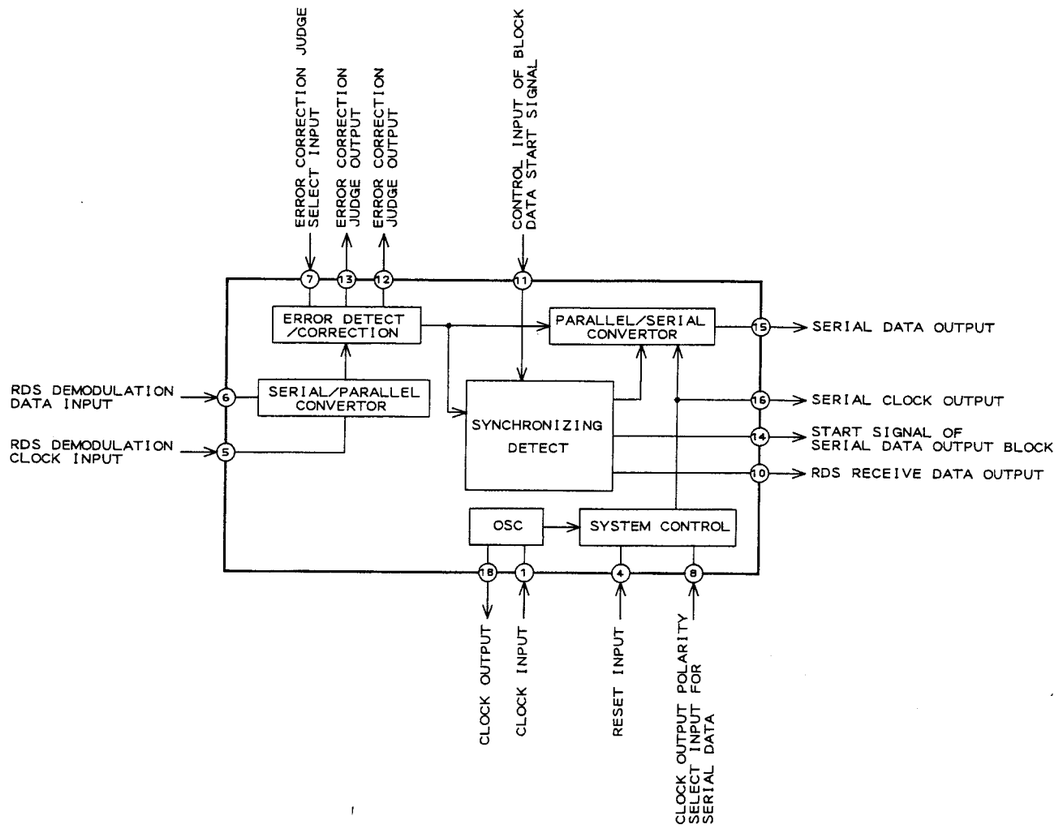

## CXA1782BQ (CD RF I-V AMP/RF AMP)

| PIN No. | PORT NAME | I/O | FUNCTION |
|---|---|---|---|
| 1 | FEO | O | Focus drive output. |
| 2 | FEI | I | Focus error signal input. |
| 3 | FDFCT | I | Time constant capacitor connecting terminal at time of defect. |
| 4 | FGD | I | Connect condenser for Focus servo gain control. |
| 5 | FLB | I | Connect condenser for Focus servo correction. |
| 6 | FE-O | O | Focus drive output. |
| 7 | FE-M | I | FOCUS AMP Inverting input. |
| 8 | SRCH | I | Connect condenser for Focus search wave. |
| 9 | TGU | I | Connect condenser for Trackink gain select. |
| 10 | TG2 | I | Connect condenser for Tracking gain select. |
| 11 | FSET | I | Terminal for peak setting for Focus tracking phase compensation. |
| 12 | TA-M | I | Tracking AMP Inverting input. |
| 13 | TA-O | O | Tracking drive output. |
| 14 | SL-P | I | Sled AMP non-inverting input. |
| 15 | SL-M | I | Sled AMP Inverting input. |
| 16 | SL-O | O | Sled drive output. |
| 17 | ISET | I | Focus search, Track jump and slide kick current input. |
| 18 | Vcc | – | +5 V |
| 19 | CLK | I | Clock signal input from the CD MI-COM. |
| 20 | XLT | I | Lutch signal input from the CD MI-COM. |
| 21 | DATA | I | Data signal input from the CD MI-COM. |
| 22 | $\overline{XRST}$ | I | RESET input. |
| 23 | C.OUT | O | Track count signal output. |
| 24 | SENS | O | FZC,DFCT,TZC,GAIN and BAL output. |
| 25 | FOK | O | Focus OK signal output. |
| 26 | CC2 | I | Input terminal of DEFECT bottom hold output which is supplied through capcitor. |
| 27 | CC1 | O | DEFECT bottom hold output terminal. |
| 28 | CB | I | DEFECT bottom hold capacitor connecting terminal. |
| 29 | CP | I | Terminal for connection of MIRR hold capacitor. (Non inverted input terminal of MIRR comparator.) |
| 30 | RF-I | I | Input terminal of RF summing AMP output which is supplied through a capacitor. |
| 31 | RF-O | O | RF summing AMP output. |
| 32 | RF-M | I | RF summing AMP inverted input terminal. |
| 33 | LD | O | APC AMP output terminal. |
| 34 | PHD | I | APC AMP input terminal. |
| 35 | PHD1 | I | RF I-V AMP inverted input terminal (for photo diode A+C of pick up) |
| 36 | PHD2 | I | RF I-V AMP inverted input terminal (for photo diode B+D of pick up) |
| 37 | FE-BIAS | I | Terminal for bias adjustment of focus error amp. |
| 38 | F | I | RF I-V AMP inverted input terminal (for photo diode F of pick up) |
| 39 | E | I | RF I-V AMP inverted input terminal (for photo diode E of pick up) |
| 40 | EI | – | Not used |
| 41 | VEE | – | GND |
| 42 | TEO | O | Tracking error amp output terminal. (E-F signal output.) |
| 43 | LPFI | I | BAL adjustment of comperator input terminal. |
| 44 | TEI | I | Tracking error input terminal. |
| 45 | ATSC | I | Window comperator input input terminal for ATSC detection. |
| 46 | TZC | I | Input terminal of tracking zero cross comparator. |
| 47 | TDFCT | I | Time constant capacitor connecting terminal at time of defect. |
| 48 | VC | O | (VCC+VEE)/2 DC voltage output terminal. |

## CXD2508AQ (CD DIGITAL SIGNAL PROCCESS & SYSTEM CONTROL MI-COM)

| Pin No. | PORT NAME | I/O | FUNCTION |
|---|---|---|---|
| 1 | SCOR | O | H output when either sub code S0 or S1 is detected. |
| 2 | SBSO | O | Serial output of Sub P to W. |
| 3 | EXCK | I | Clock input for SBSO read out. |
| 4 | SQSO | O | Serial output of SUBQ 80 bit. |
| 5 | SQCK | I | Clock input for SQSO read out. |
| 6 | MUTE | I | Muteing control. (H : MUTE, L : CANCEL) |
| 7 | SENS | O | SENS output. Output to the OPERATION MI-COM. |
| 8 | $\overline{XRST}$ | I | System reset. Reset at L. |
| 9 | DATA | I | Serial data input from THE OPERATION MI-COM. |
| 10 | XLAT | I | Latch input from the OPERATION MI-COM. (Latching of serial data at falling edge of the pulse.) |
| 11 | CLOK | I | Serial data transmission clock input from the OPERATION MI-COM. |
| 12, 53 | Vss | – | GND |
| 13 | SEIN | I | Sense input from SSP. |
| 14 | CNIN | I | Track jump number count signal input. |
| 15 | DATO | O | Serial data output to SSP. |
| 16 | XLTO | O | Serial data latch output to SSP. (Latching at fallingedge of the pulse.) |
| 17 | CLKO | O | Serial data transmission clock output to SSP. |
| 18 | SLED SW | I | Innermost position ON/OFF detection input of sled motor. (Input A) |
| 19 | SPOB | I | Innermost position ON/OFF detection input of sled motor. (Input B) |
| 20 | SPOC | I | Innermost position ON/OFF detection input of sled motor. (input C) |
| 21 | XLSL | I | X'tal selection input terminal. L when X'tal is 16.9344 MHz. H when 33.8688 MHz. |
| 22 | LD ON/OFF | O | Laser diode ON/OFF control. |
| 23 | FOK | I | Focus OK input terminal. For SENS output and servo automatic sequencer. |
| 24 | MON | – | Not used |
| 25 | MDP | O | Servo control for spindle motor. |
| 26 | MDS | – | Not used |
| 27 | LOCK | – | Not used |
| 28 | TEST | – | Regular GND for TEST terminal. |
| 29 | FILO | O | Filter output for master PLL. (slave = digital PLL) |
| 30 | FILI | I | Filter input for master PLL. |
| 31 | PCO | O | Charge pump output for master PLL. |
| 33, 75, 76 | AVss1 ~ 3 | – | GND |
| 34 | CLTV | I | VCO control voltage input for master. |
| 36 | RF | I | EFM signal input. |
| 37 | BIAS | I | Asymmetry circuir constant current input. |
| 38 | ASYI | I | Asymmetry compilasion voltage input. |
| 39 | ASYO | O | EFM full swing output. (L = Vss, H = VDD) |
| 40 | ASYE | I | L : Asymmetry circuit OFF H : Asymmetry circuit ON. |
| 41 | WDCK | – | Not used |
| 42 | LRCK | O | D/A interface for 48 bit slot. LR clock f = Fs |
| 43 | LRCKI | I | LR clock input to DAC. |
| 44 | PCMD | O | Serial data from D/A interface. |
| 45 | PCMDI | I | Audio data input to DAC. |
| 46 | BCK | O | Bit clock from D/A interface. |
| 47 | BCKI | I | Bit clock input to DAC. |
| 48 | GTOP | – | Not used |
| 49 | XUGF | – | |
| 50 | XPCK | – | |
| 51 | GFS | – | |
| 52 | RFCK | – | |
| 54 | C2PO | – | |
| 55 | XROF | – | |
| 56 | MNT3 | – | |
| 57 | MNT1 | – | |
| 58 | MNT0 | – | |
| 59 | FSTT | – | |
| 60 | C4MR | – | |
| 61 | DOUT | O | Digital out terminal. |
| 62 | EMPH | O | H output when a playback disc is emphasised. L output when no emphasis. |
| 63 | EMPHI | I | De-emphasis control input. (H : ON, L : OFF) |
| 64 | WFCK | O | WFCK (Write Frame Clock) output. |
| 65 | ZEROL | – | Not used |
| 66 | ZEROR | – | Not used |
| 67, 79, 80 | DTS1 ~ 3 | – | GND |
| 69 | NLPWM | O | L-ch PWM output. (opposite phase) |
| 70 | LPWM | O | L-ch PWM output. (in-phase) |
| 73 | XTAI | I | 33.8688 MHz X'tal oscillation circuit input. |
| 74 | XTAO | O | 33.8688 MHz X'tal oscillation circuit output. |
| 77 | NRPWM | O | R-ch PWM output. (opposite phase) |
| 78 | RPWM | O | R-ch PWM output. (in-phase) |

## LC7073M (RDS DATA PROCESS)



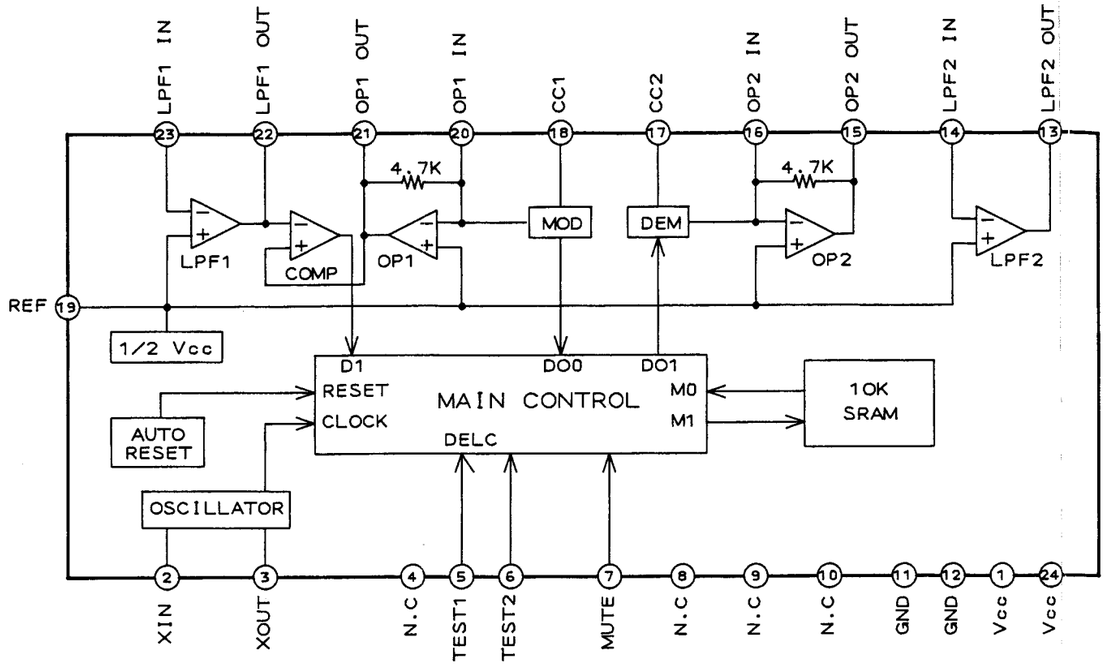
### M38197MA-148/149FP (SYSTEM CONTROL MI-COM)

| Pin No | PORT NAME | I/O | FUNCTION |
|---|---|---|---|
| 1 | PLL CLK | O | PLL clock signal output to the TUNER UNIT. |
| 2 | MAIN VR1 | I | 2 bit encoder input for electric volume control. |
| 3 | MAIN VR2 | | |
| 4 | PULSE 1 | I | TAPE 1 reel pulse input. |
| 5 | PULSE 2 | I | TAPE 2 reel pulse input. |
| 6 | LEVEL S | I | A/D input for surround level meter. |
| 7 | LEVEL C | I | A/D input for center level meter. |
| 8 | SPANA | I | A/D input for spectrum analyzer indication. |
| 9 | CLK LED | O | Clock output for LED section expansion IC. |
| 10 | PLL OUT | O | PLL control output to the TUNER UNIT. |
| 11 | STB FLD | O | Strobe pulse output to DOLBY PRO-LOGIC FLD drive IC. |
| 12 | CLK FLD | O | Clock output to DOLBY PRO-LOGIC FLD drive IC. |
| 13 | DATA FLD | O | Data output to DOLBY PRO-LOGIC FLD drive IC. |
| 14 | PHOTO IN | I | Input from the TRAY rotation position detect photo sensor. |
| 15 | CD XLAT | O | Latch output for the CD MI-COM. |
| 16 | CD CLK | O | Serial clock output to the CD MI-COM. |
| 17 | CD DATA | O | Serial data output to the CD MI-COM. |
| 18 | MODE SW | I | A/D input from the CD's open, close and clamp switches. |
| 19 | CLK TCDK | O | Clock output for controlling the expansion IC of the TUNER/CD/DECK section. |
| 20 | CD SQCK | O | SQCK clock output to the CD MI-COM. |
| 21,85 | N.C | – | No connection. |
| 22 | CD SQSO | I | SUBQ 80 bits serial input. |
| 23 | DATA DSC | O | Serial data output for controlling the DIGITAL SOUND CONTROL IC. |
| 24 | DATA | O | Serial data output to the expansion ICs (for KEY control & EVR ICs, etc.). |
| 25 | OSC PWM | O | Erasing OSC level control output.(PWM) |
| 26 | BOP | I | Blank output pulse input. (L : blank) |
| 27 | E²PR DAT | I/O | EEP ROM serial data input/output. |
| 28 | E²PR CLK | O | Serial clock output to EEP ROM. |
| 29 | CD SENS | I | Input pin for reading verious data from the CD MI-COM. |
| 30 | R CLK | I | Clock input from RDS data processor. |
| 31 | CLK DSC | O | Clock output to the DIGITAL SOUND CONTROLLOR. |
| 32 | REMOCON | I | Remote control signal input. |
| 33 | CLK AMP | O | Clock output to the expansion ICs (EVR, Key control, etc. among the PRE/MAIN AMP section). |
| 34 | CD SCOR | I | Sub code detect input from the CD MI-COM. (H : sub code 0 or 1 is detected) |
| 35 | RESET | I | Reset input |
| 36 | XC IN | I | 32.768 kHz X'tal input for clock. |
| 37 | XC OUT | O | Output to the 32.768 kHz X'tal. |
| 38 | X IN | I | 8.0 MHz X'tal input. |
| 39 | X OUT | O | Output to the 8.0 MHz X'tal. |
| 40 | GND-D | – | Digital ground. |
| 41 - 44 | KEY1 - 4 | I | Key matrix input from the operation switches. |
| 45 - 60 | DIG 1 - 16 | O | System FLD's grid drive output. |
| 61 - 80 | SEG 1 - 20 | O | System FLD's segment drive output. (SEG 17~20 : 700 series models only) |
| 81 | POW DOWN | I | Back up voltage detection input. (H : normal, L : Power down) |
| 82 | STB AMP | O | Strobe pulse output for AMP section expansion IC. |
| 83 | OE | O | Output enable control for expansion ICs. (L : enable, H : expansion IC output → high impedance). |
| 84 | STB VR | O | Strobe pulse output for EVR (electric volume) IC. |
| 86 | STB TCDK | O | Strobe pulse output for TUNER/DECK/CD section expansion ICs. |
| 87 | STB PRE | O | Strobe pulse output for PRE AMP section expansion IC. |
| 88 | STB MEC | O | Strobe pulse output for DECK MECHA. section expansion IC. |
| 89 | R DATA | I | Data input from RDS data processor. |
| 90 | R START | I | Start signal input from RDS data processor. |
| 91 | VCC | – | +5 V power supply. |
| 92 | R RESET | O | Reset output to RDS error correction IC. (L : reset) |
| 93 | STEREO | I | A/D input for the "STEREO" indicator. |
| 94 | TUNED | I | A/D input for the "TUNED" indicator. |
| 95 | STB LED | O | Strobe pulse output for LED section expansion IC. |
| 96 | PLL IN | I | PLL control input from the tuner unit. |
| 97 | PLL CE | O | PLL chip enable output to the tuner unit. |
| 98 | –VP | I | Negative power supply for FLD blanking. |
| 99 | VSS | – | To be grounded. |
| 100 | VREF | I | Reference voltage input. (+5 V) |

### M62422FP (SOUND CONTROLLER)

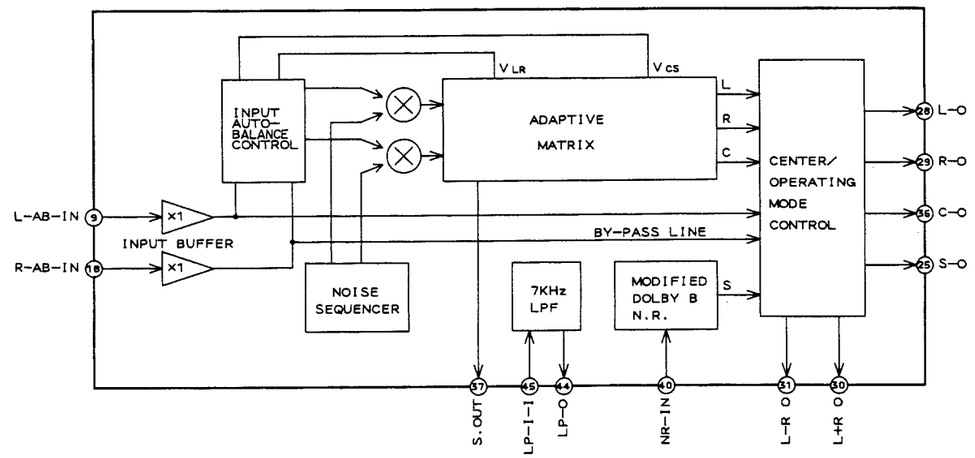
| Pin No | PORT NAME | I/O | FUNCTION |
|---|---|---|---|
| 1 | CLOCK | I | Clock signal input pin for data transmission. |
| 2 | DATA | I | Control data input pin. |
| 3 | DVDD | – | Power supply for internal logic circuit. |
| 4 | VCUT | – | Capacitor connecting pin for vocal cut. |
| 5 | SUROUT | O | This pin outputs surround (L-R or L+R) signal and vocal cut signal. |
| 6 | IN1 | I | Channel 1 input pin. |
| 7 | KEYCON1 | O | Output pin to the key control circuit. |
| 8 | MIC IN1 | I | Mic signal input pin during KARAOKE function. |
| 9 | INBASS1 | I | BASS resonant bufferring AMP input pin. |
| 10 | NFBASS1 | O | BASS resonant bufferring AMP output pin. |
| 11 | FBASS1 | – | BASS BPF (resonant AMP) connecting pin. |
| 12 | INMID1 | I | MID resonant bufferring AMP input pin. |
| 13 | NFMID1 | O | MID resonant bufferring AMP output pin. |
| 14 | FMID1 | – | MID BPF (resonant AMP) connecting pin. |
| 15 | FTRE1 | – | TREBLE BPF connecting pin. |
| 16 | REC OUT1 | O | Channel 1 REC OUT pin. |
| 17 | FBB1 | I | BASS boost BPF (resonant AMP) connecting pin. |
| 18 | NFBB1 | O | BASS boost resonant bufferring AMP output pin. |
| 19 | INBB1 | I | BASS boost resonant bufferring AMP input pin. |
| 20 | OUT1 | O | Channe 1 output pin. |
| 21 | AGND | – | Internal analog circuit grounding pin. |
| 22 | AVss | – | Negative power supply pin for internal analog circuit. |
| 23 | OUT2 | O | Channe 2 output pin. |
| 24 | INBB2 | I | BASS boost resonant bufferring AMP input pin. |
| 25 | NFBB2 | O | BASS boost resonant bufferring AMP output pin. |
| 26 | FBB2 | – | BASS boost BPF (resonant AMP) connecting pin. |
| 27 | REC OUT2 | O | Channel 2 REC OUT pin. |
| 28 | FTRE2 | – | TREBLE BPF connecting pin. |
| 29 | FMID2 | – | MID BPF (resonant AMP) connecting pin. |
| 30 | NFMID2 | O | MID resonant bufferring AMP output pin. |
| 31 | INMID2 | I | MID resonant bufferring AMP input pin. |
| 32 | FBASS2 | – | BASS BPF (resonant AMP) connecting pin. |
| 33 | NFBASS2 | O | BASS resonant bufferring AMP output pin. |
| 34 | INBASS2 | I | BASS resonant bufferring AMP input pin. |
| 35 | MIC IN2 | I | Mic signal input pin during KARAOKE function. |
| 36 | KEYCON2 | O | Output pin to the key control circuit. |
| 37 | IN2 | I | Channel 2 input pin. |
| 38 | SUR R | – | Time constant setting capacitor connectig pin for the surround circuit. |
| 39 | SUR C | – | Time constant setting capacitor connectig pin for the surround circuit. |
| 40 | AVDD | – | Positive power supply pin for internal analog circuit. |
| 41 | DGND | – | Internal logic circuit grounding pin. |
| 42 | N.C | – | No connection. |

## M65843AFP (DIGITAL ECHO)




| PIN No. | PORT NAME | I/O | FUNCTION |
|---|---|---|---|
| 1 | VDD | – | +5 V power supply for digital section. |
| 2 | X IN | I | X'tal OSC input. |
| 3 | X OUT | – | X'tal OSC output. |
| 4 | NC | – | No connection. |
| 5 | TEST 1 | I | Test pin (fixed H in the normal condition). |
| 6 | TEST 2 | I | Test pin (fixed L in the normal condition). |
| 7 | MUTE | I | Mute control input (L : mute). |
| 8 ~ 10 | NC | – | No connection. |
| 11 | D.GND | – | Digital ground. |
| 12 | A.GND | – | Analog ground. |
| 13 | LPF2 OUT | O | Constructs the output side low pass filter from the externally connected capacitor & resistor. |
| 14 | LPF2 IN | I | |
| 15 | OP2 OUT | O | Constructs the integrator for demodulation from the externally connected capacitor & resistor. |
| 16 | OP2 IN | I | |
| 17 | CC2 | – | Current control for demodulator ADM control. |
| 18 | CC1 | – | Current control for modulator ADM control. |
| 19 | REF | – | Analog reference voltage (1/2 Vcc). |
| 20 | OP1 IN | I | Constructs the integrator for modulation from the externally connected capacitor & resistor. |
| 21 | OP1 OUT | O | |
| 22 | LPF1 OUT | O | Constructs the input side low pass filter from the externally connected capacitor & resistor. |
| 23 | LPF1 IN | I | |
| 24 | Vcc | – | +5 V analog power supply. |

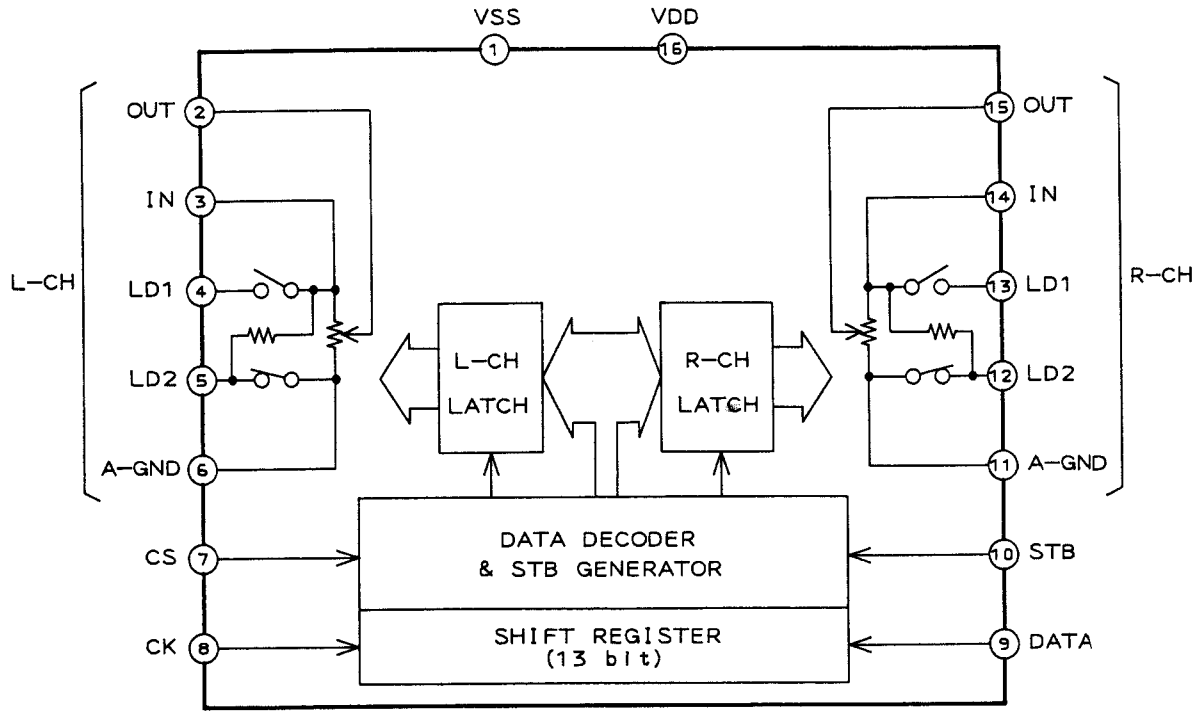
## NJM2177A FB3 (DOLBY PRO LOGIC SURROUND DECODER)




## SAA6579T (RDS DEMODULATOR)

| PIN No | PORT NAME | I/O | FUNCTION |
|---|---|---|---|
| 1 | QUAL | O | QUALITY INDICATION OUTPUT |
| 2 | RDDA | O | RDS DATA OUTPUT |
| 3 | VREF | — | REFERENCE VOLTAGE OUTPUT |
| 4 | MUX | I | MULTIPLEX SIGNAL INPUT |
| 5 | VDD | — | +5 V SUPPLY VOLTAGE FOR ANALOG PART |
| 6 | VSS | — | GND FOR ANALOG PART |
| 7 | CIN | I | SUBCARRIER INPUT TO COMPARATOR |
| 8 | SCOUT | O | SUBCARRIER OUTPUT OF RECONSTRUCTION FILTER |
| 9 | MODE | I | OSCILLATOR MODE / TEST CONTROL INPUT |
| 10 | TEST | I | TEST ENABLE INPUT |
| 11 | VSS | — | GND FOR DIGITAL PART |
| 12 | VDD | — | +5 V SUPPLY VOLTAGE FOR DIGITAL PART |
| 13 | OSC1 | I | OSCILLATOR INPUT |
| 14 | OSC0 | O | OSCILLATOR OUTPUT |
| 15 | T57 | O | 57 kHz CLOCK SIGNAL OUTPUT |
| 16 | RDCL | O | RDS CLOCK OUTPUT |

TC9260P (ELECTRIC VOLUME CONTROL)




TC9412P (ELECTRIC VOLUME CONTROL)